A2200-6

THE AMERICAN HEALTH CARE SYSTEM 1984

Edited by

Steven D. Culler, Ph.D.
Center for Health Policy Research
and
Annette Van Veen Daigle (Chapter 5)
Division of Survey and Data Resources

The American Medical Association

NOTE: Tables 41–47 are reprinted with the permission of the American Hospital Association. Source: *Hospital Statistics*, published by the American Hospital Association, copyright 1983.

Copyright © 1984
American Medical Association

All Rights Reserved

Additional copies may be purchased from:
Order Department OP-259
American Medical Association
P.O. Box 10946
Chicago, IL 60610

NEA:84-208-259:3M:5/84

ISBN 0-89970-173-6

TABLE OF CONTENTS

An Introduction to the American Health Care System 1

Chapter 1: Health Status of the U.S. Population .. 1

Infant Mortality in the United States

Table 1: Late Fetal and Infant Mortality Rates According to Race, Selected Years 1950–1982 4

Table 2: Percent of Live Births with Low Birth Weight by Race, Selected Years 1970–1980.. 5

Morbidity and Mortality of the United States Population

Figure 1: Reported Cases of Selected Diseases Before and After Availability of Immunization: 1940/1980 6

Table 3: Selected Notifiable Disease Rates, According to Disease, Selected Years 1960–1981..... 7

Table 4: Physician Visits, According to Source of Place of Care, by Age, Sex, and Race in 1964, 1975, and 1981 8

Table 5: Restricted-activity and Bed-disability Days, by Age, Sex, and Race in 1975, 1980, and 1981 9

Table 6: Life Expectancy at Birth According to Race and Sex, Selected Years 1900–1982 ...10

Table 7: Age-adjusted Death Rates for Selected Causes of Death, Selected Years 1960–1982 .11

Aging of the United States Population

Figure 2: Distribution of United States Population by Age, Selected Years 1970–2000 12

Figure 3: Number of Elderly by Age Groups in United States: 1950–2050 14

Chapter 2: National Health Care Expenditures and Financing

Overall Picture

Figure 4: The Nation's Health Dollar in 1982 17

Figure 5: Aspects of the Health Care Industry Compared to the Economy as a Whole in 1982 18

Table: 8: Aggregate and Per Capita National Health Expenditures, by Percent of Gross National Product, Selected Years 1929–1982 19

Table 9: National Health Expenditures by Type of Expenditure, Selected Years 1950–1982 20

Table 10: National Health Care Expenditures by Type of Expenditure and Source of Funds in 1982 21
Medicare
Table 11: Medicare Enrollment—Number of Aged Medicare Enrollees and Percent Change by Type of Coverage, Age, Sex, and Race in 1966, 1980, and 1981 23
Table 12: Medicare Utilization—Number of Aged Persons Served and Percent Change by Type of Service in 1967, 1980, and 1981 24
Table 13: Medicare Reimbursement—Amount Reimbursed for Aged Persons and Percent Change by Type of Service in 1967, 1980, and 1981 25
Consumer Price Index
Table 14: Consumer Price Index, Selected Years 1950–1983 26
Table 15: Medical Care Component of the Consumer Price Index, Selected Years 1950–1983 27
Table 16: Annual Percentage Increase in Selected Components of the Consumer Price Index, Selected Years 1972–1983 28

Chapter 3: Financing Mechanisms for the Provision of Health Services

Table 17: Personal Health Care Expenditures by Selected Third-Party Players and Type of Expenditure in 1982 30
Figure 6: Percentage Distribution of Personal Health Care Expenditures by Source of Funds: 1970–1982 31
Figure 7: Distribution of Health Insurance Coverage in 1980 32

Chapter 4: Medical Education and Medical Manpower

Undergraduate Medical Education
Table 18: Application Activity for First-Year Class, Selected Years 1962–1963 to 1982–1983 35
Table 19: Students and Graduates in Medical and Basic Science Schools, by Selected Years 1962–1963 to 1982–1983 36
Table 20: Women in U.S. Medical Schools: 1972–1973 to 1982–1983 37
Table 21: Percentage of Minority Enrollment of U.S. Citizens in U.S. Medical Schools in 1982–1983 38

Expenditures, Funds, and Student Loans
Table 22: U.S. Medical School Expenditures by Function in 1981–1982 39
Table 23: Percent of Funds to Public and Private Medical Schools by Source of Funds in 1971–1972 and 1981–1982 40
Table 24: Major Sources of Loans and Scholarship Funds in 1980–1981 and 1981–1982 41
Graduate Medical Education
Table 25: Number of Postgraduate Year 1 (PGY-1) Positions Offered, Number of Residency Positions Offered, and Number of Residents on Duty, by Specialty: 1981–1982 and 1983–1984 43
Figure 8: Foreign Medical Graduates by Citizenship in Residency Positions: 1978–1982 45

Chapter 5: Health Manpower and Physician Characteristics and Distribution in the U.S.

Overview
Table 26: Federal and Non-federal Physicians and the U.S. Population, Selected Years 1900–1982 48
Figure 9: Federal and Non-federal Physicians by Major Professional Activity, Selected Years 1965–1982 49
Figure 10: Employment of Physicians in 1970 and 1982 50
Figure 11: Percentage Distribution of Federal and Non-federal Physicians by Age and Sex in 1982 51
Physicians' Characteristics and Distribution
Table 27: Federal and Non-federal Physicians by Major Professional Activity, Selected Years 1970–1982 52
Table 28: Federal and Non-federal Physicians by Specialty and Activity in 1982 53
Table 29: Federal and Non-federal Physicians by Specialty, Selected Years 1963–1982 56
Table 30: Federal and Non-federal Women Physicians by Specialty, Selected Years 1963–1982 57
Table 31: Federal and Non-federal Foreign Medical Graduates by Specialty, Selected Years 1970–1982 58
Table 32: Federal and Non-federal Physicians by Specialty and Corresponding Board Certification in 1981 59

Table 33: Non-federal Physician Population Ratio and Rank by State in 1982 62
Health Manpower
Table 34: Estimated Number of Persons Active in Selected Health Occupations in 1981 65
Table 35: Active Registered Nurses, According to Employment Status and Number Per 100,000 Population, Selected Years 1950–1980 66

Chapter 6: Profile of Medical Practice

Table 36: Mean Net Income (Income After Expenses, but Before Taxes) from Medical Practice, Selected Years 1973–1982 69
Table 37: Mean Number of Hours in Patient Care Activities Per Week, Selected Years 1973–1982 70
Table 38: Mean Number of Total Patient Visits Per Week, Selected Years 1975–1982 71
Table 39: Mean Professional Expenses, Selected Years 1973–1982 72
Table 40: Mean Fee for an Office Visit with an Established Patient, Selected Years 1973–1982 73

Chapter 7: Health Care Facility Characteristics in the U.S.

Table 41: Trends in U.S. Hospitals by Classification: 1980–1982 76
Table 42: Short-Stay Hospitals and Beds According to Type of Ownership, Selected Years 1960–1982 77
Table 43: Distribution of Community Hospitals in 1972 and 1982 78
Table 44: Selected Measures in Community Hospitals in 1972, 1981, and 1982 79
Table 45: Selected Community Hospitals' Facilities and Services in 1981 and 1982 80
Table 46: Total Expenditures of Community Hospitals in 1981 and 1982 82
Table 47: Adjusted Expenses Per Inpatient Day in Community Hospitals in 1981 and 1982 83

Introduction to the American Health Care System

The purpose of this book is to highlight some of the major socioeconomic issues and demographic trends associated with the American health care system. To facilitate the presentation of the data, this book has been divided into six topic areas of central importance to any discussion of the American health care system:

- Health Status of the U.S. Population;
- National Health Care Expenditures and Financing;
- Financing Mechanisms for the Provision of Health Services;
- Medical Education and Medical Manpower;
- Health Manpower and Physician Characteristics and Distribution in the U.S.;
- Profile of Medical Practice
- Health Care Facility Characteristics in the U.S.

Each topic area is a chapter in this book. All of the chapters begin with a short overview which highlights some of the major trends that can be detected within the series of tables and figures that comprise each chapter.

Chapter 1: Health Status of the U.S. Population

No precise measurement exists for the health status of an entire population. However, this chapter presents a series of tables and figures that are commonly accepted as indicators of a nation's health status. This information is grouped to provide insight on health status for the following three areas:

- infant mortality rates;
- morbidity and mortality of the U.S. population; and
- the aging population of the nation.

The overall picture that emerges from the statistical review is that there has been a substantial improvement in the nation's health status in each of these areas over the last two decades.

The infant mortality rate continues to decline, implying improvement in access to prenatal care. The infant mortality rate fell to 12.6 deaths per 1,000 live births in 1980. Provisional data for 1981 and 1982 show continued declines in the infant mortality rate to 11.7 and 11.2 deaths per 1,000 live births, respectively. A second improvement in the health status of infants has been

the decline in the proportion of live births with birth weights below 2,500 grams. Currently less than 7 percent of all live births weigh less than 2,500 grams. Data for selected years by race on late fetal and infant mortality and percent of live births with low birth weights are presented in Tables 1 and 2.

Immunization against communicable diseases has reduced the incidence of several diseases responsible for substantial morbidity and mortality in the United States. One example of this is polio. When a vaccine first became available nationally in 1955, approximately 29,000 cases of polio were reported. By 1975, only eight cases of polio were reported to the Centers for Disease Control. However, it should be noted that the disease rate has not declined over time for all notifiable diseases. Figure 1 shows the effect of immunization on selected diseases; Table 3 provides the number of cases per 100,000 people for selected diseases over time.

Two alternative indicators that are sometimes used to measure morbidity are the number of physician visits per person (Table 4) and the number of restricted-activity days or bed-disability days (Table 5). Before examining these measures, it should be noted that the number of physician visits per person can increase as the result of greater access (increases in the supply of physicians) as well as increased demand for physicians' services (morbidity). Since 1964, physician visits per person have remained remarkably stable between 4.6 and 5.0 visits per year for all persons. Likewise, both restricted-activity days and bed-disability days have increased at an annual rate of less than 1 percent between 1975 and 1981. In 1981 the average person experienced 18.5 restricted-activity days and 6.8 bed-disability days.

In addition to declines in morbidity rates, there have been substantial improvements in mortality rates for the United States. One measure of a nation's mortality rate is life expectancy. In the United States life expectancy rose to 74.5 years for a baby born in 1982 from 70.9 years for a baby born in 1970 (Table 6). Females continue to have significantly longer expected lives than males, 78.2 years compared to 70.8 years, respectively. An alternative means of measuring mortality is to examine death rates from various causes (Table 7). Reductions in the number of deaths caused by heart disease is the single largest type of reduction in death rates over time. Since 1960 the age-adjusted death rate for heart diseases fell from 286.2 to 190.8 per 100,000 residents.

A phenomenon that will have important implications on the United States health care system in the future is the aging of the population. This process may soon begin to distort statistics on the average health status of the population. Evidence already indicates that the elderly require a higher utilization of health care services. For example, although they comprised only 11 percent of the population in 1982, they accounted for about one-third of hospital days and had an average of 2 more physician visits per person per year than those under 65 years of age. In the future, it may become necessary to adjust statistics on the health status of the entire population by the age distribution. Figures 2 and 3 show how age cohorts will change over time. The 65–74 age cohort will increase most rapidly during the 1980s, while the 75–84 group is projected to grow the fastest during the 1990s.

Table 1
Late Fetal and Infant Mortality Rates According to Race, Selected Years 1950–1982

Year	Total				White				Black			
	Within 28 days of Birth	Under 1 Year	Under 28 days	28 days to 1 year	Within 28 days of Birth	Under 1 Year	Under 28 days	28 days to 1 Year	Within 28 days of Birth	Under 1 Year	Under 28 days	28 days to 1 Year
1950	14.9	29.2	20.5	8.7	13.3	26.8	19.4	7.4	—	43.9	27.8	16.1
1960	12.1	26.0	18.7	7.3	10.8	22.9	17.2	5.7	—	44.3	27.8	16.5
1965	11.9	24.7	17.7	7.0	10.5	21.5	16.1	5.4	—	41.7	26.5	15.2
1970	9.5	20.0	15.1	4.9	8.6	17.8	13.8	4.0	—	32.6	22.8	9.9
1975	7.8	16.1	11.6	4.5	7.1	14.2	10.4	3.8	11.4	26.2	18.3	7.9
1978	6.6	13.8	9.5	4.3	6.0	12.0	8.4	3.6	9.7	23.1	15.5	7.6
1979	6.4	13.1	8.9	4.2	5.9	11.4	7.9	3.5	9.0	21.8	14.3	7.5
1980	5.8	12.6	8.5	4.1	5.3	11.0	7.5	3.5	8.1	21.4	14.1	7.3
1981[1]	—	11.7	7.8	3.9	—	—	—	—	—	—	—	—
1982[1]	—	11.2	7.6	3.6	—	—	—	—	—	—	—	—

[1]Provisional data.

SOURCES: National Center for Health Statistics: *Vital Statistics of the United States*, Vol. II, 1950–80. Public Health Service, Washington. U.S. Government Printing Office; Annual summary of births, deaths, marriages, and divorces, United States, 1982. *Monthly Vital Statistics Report*, Vol. 31-No. 13. DHHS Pub. No. (PHS) 83-1120. Public Health Service. Hyattsville, MD, Sept. 27, 1983.

Table 2
Percent of Live Births with Low Birth Weight by Race, Selected Years 1970–1980

Birth Weight	Year					
	1970	1975	1976	1978	1979	1980
			Total			
2,500 grams or less	7.94	7.39	7.26	7.11	6.94	6.84
1,500 grams or less	1.17	1.16	1.15	1.17	1.15	1.15
			White			
2,500 grams or less	6.84	6.26	6.13	5.94	5.80	5.70
1,500 grams or less	0.95	0.92	0.91	0.91	0.90	0.90
			Black			
2,500 grams or less	13.86	13.09	12.97	12.85	12.55	12.49
1,500 grams or less	2.40	2.37	2.40	2.43	2.37	2.44

NOTE: Figures for 1970 are based on a 50-percent sample; for 1975–80, they are based on 100 percent of births in selected states and on a 50-percent sample of births in all other states.

SOURCE: National Center for Health Statistics: *Vital Statistics of the United States*, Vol. 1, for data years 1970–1976, Public Health Service, Washington. U.S. Government Printing Office; for 1978–1980, Public Health Service. To be published.

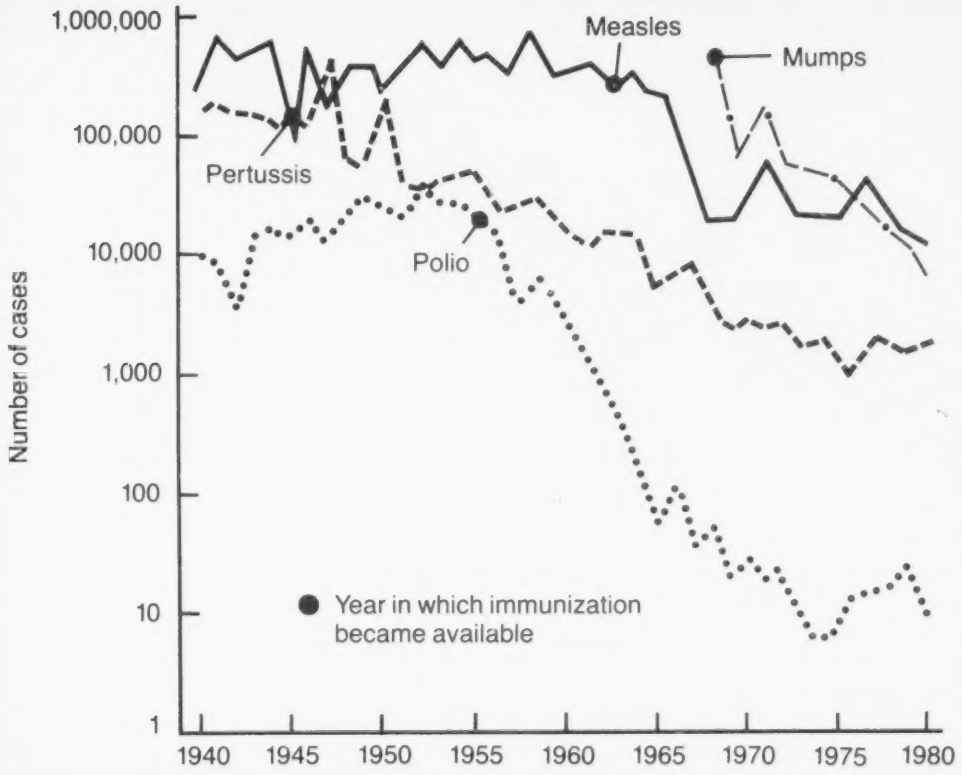
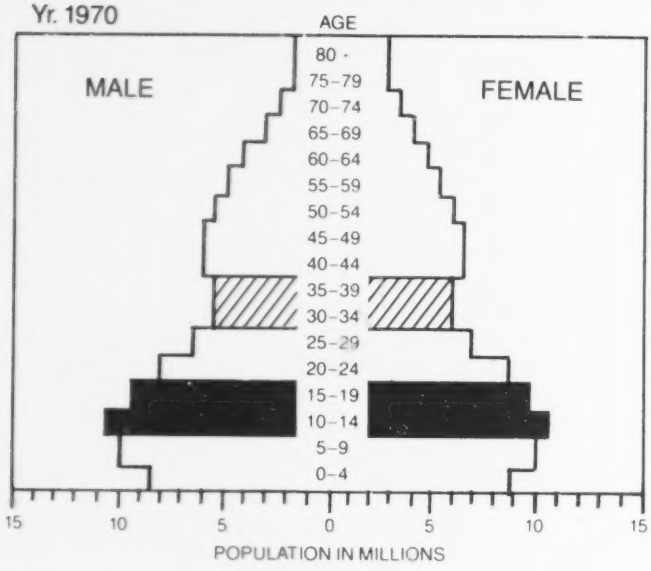


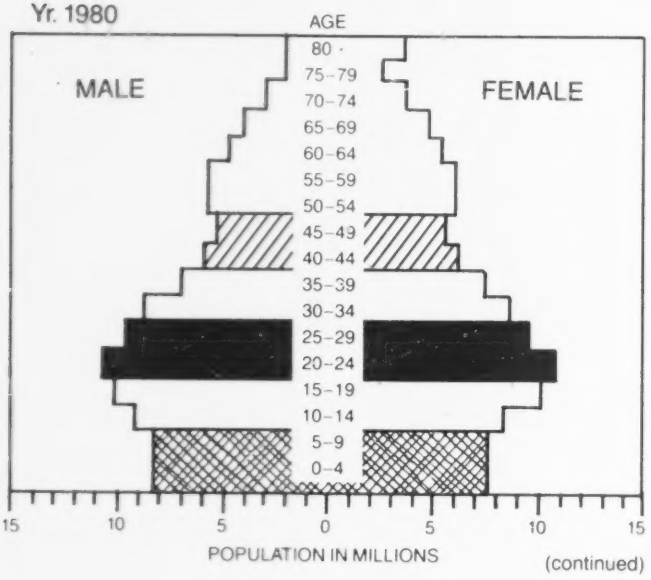
Figure 1

Reported Cases of Selected Diseases Before and After Availability of Immunization: 1940–1960

SOURCE: National Center for Health Statistics: *Health, United States, 1982.* DHHS Pub. No. (PHS) 83-1232. Public Health Service, Washington, D.C. U.S. Government Printing Office, Dec. 1982.

Figure 2
Distribution of United States Population by Age, Selected Years 1970–2000





(continued)

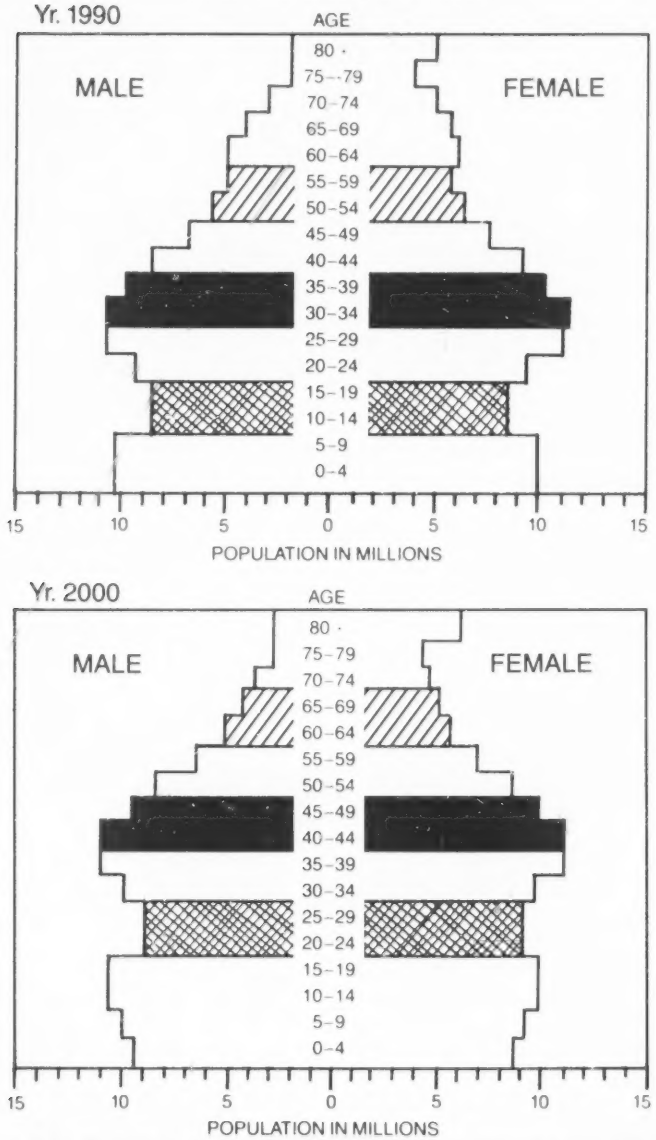
DEPRESSION COHORT
PERSONS BORN 1930–39

BABY BOOM COHORT
PERSONS BORN 1950–59

BABY BUST COHORT
PERSONS BORN 1970–79

Figure 2 (cont'd.)

Distribution of United States Population by Age, Selected Years 1970–2000



SOURCE: 1960–1970 U.S. Bureau of the Census. *1970 U.S. Census of Population. General Population Characteristics.* United States Summary Vol 1 PC(1) 81, 1972. Table 52 and 1980–2050.

Table 3
Selected Notifiable Disease Rates, According to Disease, Selected Years 1960-1981

Disease	Year						
	1960	1965	1970	1975	1979	1980	1981
	Number of Cases per 100,000 population						
Chickenpox	NA	NA	NA	78.11	102.93	96.69	100.48
Diphtheria	0.51	0.08	0.21	0.14	0.03	0.00	0.00
Hepatitis A	NA	NA	27.87	16.82	13.82	12.84	11.25
Hepatitis B	NA	NA	4.08	6.30	7.02	8.39	9.22
Measles	245.42	135.33	23.23	11.44	6.18	5.96	1.36
Mumps	NA	NA	55.55	27.99	6.55	3.86	2.20
Pertussis	8.23	3.51	2.08	0.82	0.74	0.76	0.54
Rubella	NA	NA	27.75	7.81	5.36	1.72	0.91
Tuberculosis[1]	30.83	25.33	18.22	15.95	12.57	12.25	11.94
Syphilis	68.78	58.81	45.46	38.00	30.68	30.38	31.98
Gonorrhea	145.33	169.36	298.52	472.91	459.44	443.44	435.24

NA = Not reported nationally.

[1]Data subsequent to 1974 are not comparable to prior years because of changes in reporting criteria that became effective in 1975.

NOTE: Rates greater than 0 but less than 0.005 are shown as 0.00.

SOURCES: Centers for Disease Control: Reported morbidity and mortality in the United States, 1981. *Morbidity and Mortality Weekly Report* 30(54). Public Health Service, Atlanta, GA, Oct. 1982; Venereal Disease Control Division, Center for Prevention Services, Centers for Disease Control: Selected data.

Table 4
Physician Visits, According to Source of Place of Care, by Age, Sex, and Race in 1964, 1975, and 1981

	All Sources or Places			Physician's Office or Clinic or Group Practice			Hospital Outpatient Department[1]		
	1964	1975	1981	1964	1975	1981	1964	1975	1981
	Number per Person			Percent of Visits					
Total	4.6	5.0	4.6	69.7	67.1	68.6	12.2	13.2	13.3
Age									
Under 17 years	3.7	4.2	4.1	62.2	62.2	64.4	13.7	14.6	13.3
17–44 years	4.6	5.0	4.2	73.8	66.1	69.5	13.0	13.7	13.6
45–64 years	5.0	5.6	5.1	76.8	72.6	71.3	10.0	12.1	14.1
65 years and over	6.7	6.6	6.3	64.2	76.2	73.8	8.5	9.0	10.6
Sex									
Male	4.0	4.4	4.1	69.9	65.4	67.5	13.2	15.0	15.7
Female	5.1	5.6	5.1	69.5	68.1	69.3	11.4	12.0	11.7
Race									
White	4.7	5.1	4.6	71.0	68.1	70.2	10.2	11.9	11.1
Black	3.6	4.9	4.7	56.2	58.5	57.3	32.7	23.5	27.6

[1]Includes hospital outpatient clinic or emergency room.

SOURCE: Division of Health Interview Statistics, National Center for Health Statistics: Data from the National Health Interview Survey. (Data are based on household interviews of a sample of the civilian non-institutionalized population.)

Table 5
Restricted-activity and Bed-disability Days, by Age, Sex, and Race in 1975, 1980, and 1981

Characteristic	Restricted-activity Days			Bed-disability Days		
	1975	1980	1981	1975	1980	1981
	Number per person per year					
Total	17.6	18.6	18.5	6.5	6.8	6.8
Age						
Under 17 years	11.0	11.6	10.5	4.4	5.2	4.8
17–44 years	14.4	15.1	15.1	5.6	5.6	5.4
45–64 years	24.2	26.5	27.5	8.4	8.4	9.0
65 years and over	38.4	39.2	39.9	12.9	13.8	14.0
Sex						
Male	15.8	17.2	17.5	5.5	5.9	6.0
Female	19.2	19.9	19.6	7.4	7.7	7.6
Race						
White	17.1	18.2	18.0	6.1	6.5	6.4
Black	23.4	24.1	23.6	10.0	10.4	10.3

SOURCE: Division of Health Interview Statistics, National Center for Health Statistics: Data from the National Health Interview Survey. (Data are based on household interviews of a sample of the civilian non-institutionalized population.)

Table 6
Life Expectancy at Birth According to Race and Sex, Selected Years 1900–1982

Specified Age and Year	Total			White			Black		
	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female
1900	47.3	46.3	48.3	47.6	46.6	48.7	33.0	32.5	33.5
1950	68.2	65.6	71.1	69.1	66.5	72.2	60.7	58.9	62.7
1960	69.7	66.6	73.1	70.6	67.4	74.1	63.2	60.7	65.9
1970	70.9	67.1	74.8	71.7	68.0	75.6	64.1	60.0	68.3
1975	72.6	68.8	76.6	73.4	69.5	77.3	66.8	62.4	71.3
1980	73.7	70.0	77.5	74.4	70.7	78.1	68.0	63.7	72.3
1981[1]	74.1	70.3	77.9	74.7	71.0	78.5	—	—	—
1982[1]	74.5	70.8	78.2	75.1	71.4	78.7	69.3	64.8	73.8

[1]Provisional data.

SOURCE: National Center for Health Statistics: *Health, United States*, 1983, Public Health Service. Washington, D.C., U.S. Government Printing Office, forthcoming.

(Data are based on the national vital registration system.)

Table 7
Age-adjusted Death Rates for Selected Causes of Death, Selected Years 1960–1982

Cause of Death	Year						
	1960	1965	1970	1975	1980	1981[1]	1982[1]
	Deaths per 100,000 residents						
All Causes	760.9	739.0	714.3	630.4	585.8	571.6	556.4
Diseases of Heart	286.2	273.9	253.6	217.8	202.6	196.3	190.8
Cerebrovascular Diseases	79.7	72.7	66.3	53.7	40.8	38.3	36.1
Malignant Neoplasms	125.8	127.0	129.9	129.4	132.8	131.6	133.3
Respiratory System	19.2	23.0	28.4	32.1	36.4	37.0	37.7
Breast[2]	22.3	22.8	23.1	22.6	22.7	—	—
Pneumonia and Influenza	28.0	23.5	22.1	16.4	12.9	12.8	11.3
Chronic Liver Disease and Cirrhosis	10.5	12.1	14.7	13.7	12.2	11.5	10.4
Diabetes Mellitus	13.6	13.4	14.1	11.4	10.1	9.9	9.2
Accidents and Adverse Effects	49.9	53.3	53.7	44.2	43.3	40.2	37.1
Motor Vehicle Accidents	22.5	26.5	27.4	21.0	22.9	21.9	19.5
Suicide	10.6	11.4	11.8	12.5	11.4	11.3	11.5
Homicide and Legal Intervention	5.2	6.2	9.1	10.4	10.8	10.3	9.7

[1]Provisional Data. [2]Female only.

SOURCES: National Center for Health Statistics: *Health, United States*, 1983, Public Health Service. Washington, D.C., U.S. Government Printing Office, forthcoming.

(Data are based on the national vital registration system.)

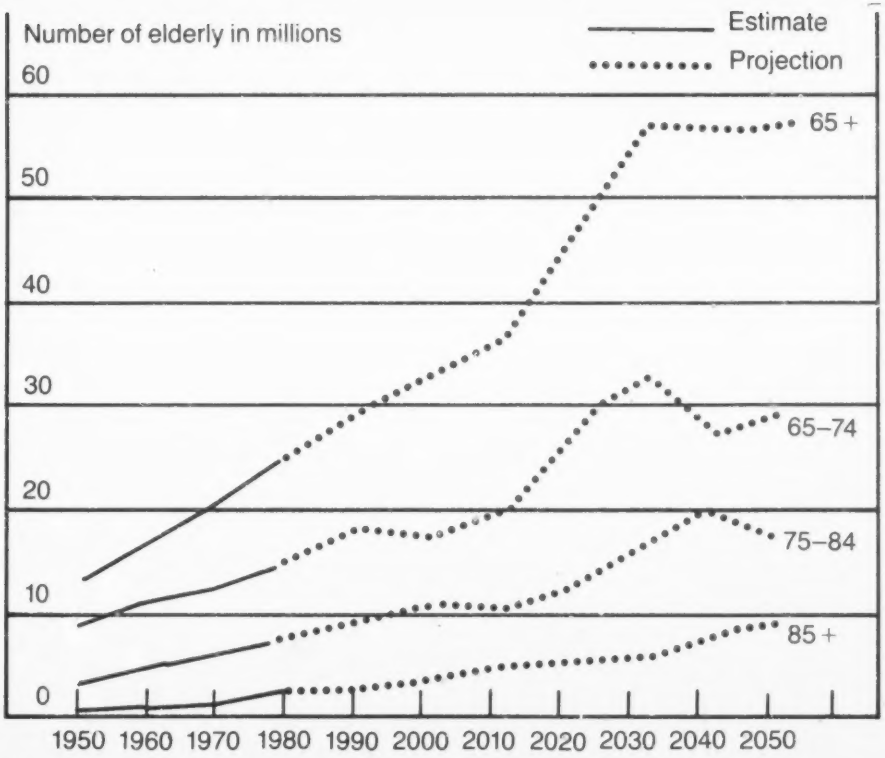


Figure 3
Number of Elderly by Age Groups in United States: 1950–2050

SOURCE: U.S. Bureau of the Census, Current Population Reports, Series P-25, No. 764. U.S. Government Printing Office, Washington, D.C. 1977.

Chapter 2: National Health Care Expenditures and Financing

In 1982, health care expenditures in the United States totaled $322.4 billion, an average of $1,365 per person, and comprised 10.5 percent of the gross national product. This chapter presents a variety of information on health care expenditures and financing. The information is divided into the following areas:

- national health care expenditures;
- trends in the Medicare program; and
- medical care price changes.

The rapid growth in spending for health care has led to a national debate about the philosophy of health care financing and may lead to substantial changes in the methods of federal payment for health care.

From 1981 to 1982 there was little change in the patterns of health care spending or financing. On the expenditure side in 1982, hospital care accounted for 42 percent of total health care spending, and spending for physician services made up 19 percent (Figure 4). Public sources provided 43 percent of every dollar spent on health care, while direct patient payment provided only 28 percent in 1982.

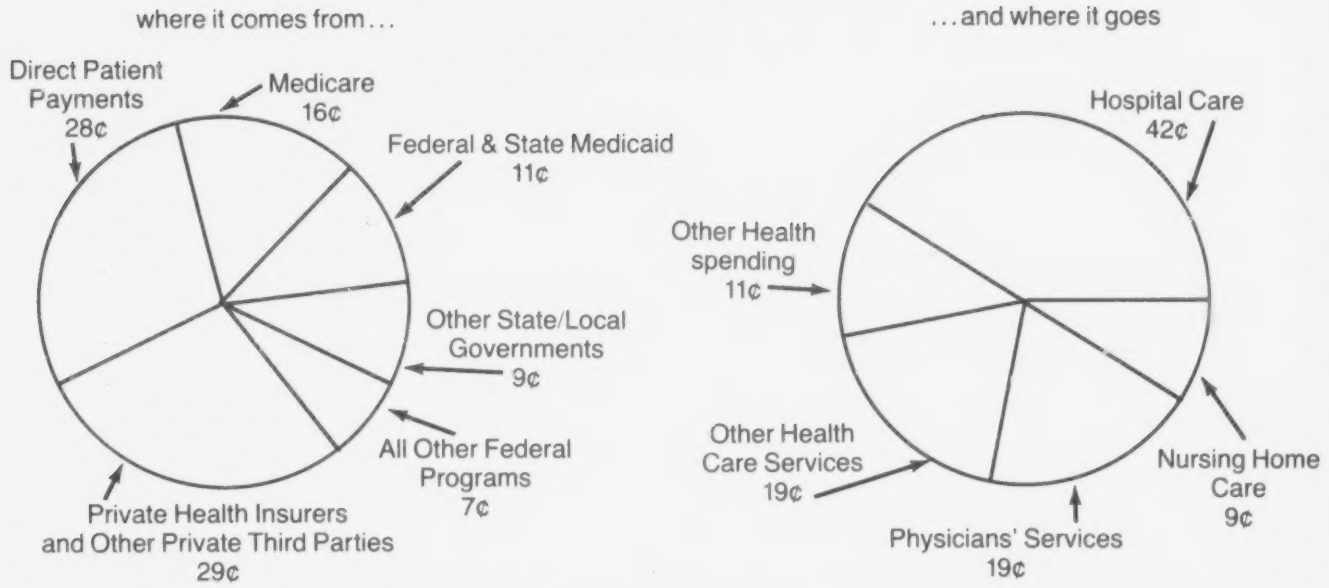
The 12.7 percent growth in total health care expenditures in 1982 implies that the health care sector of the economy experienced a more robust growth than the economy as a whole (Figure 5). Expenditures grew at nearly twice the rate of personal income; while employment and hours worked increased in the health care sector compared to actual declines in the economy as a whole. Table 8 provides a time series for selected years on per capita expenditures on health care and the percent of GNP spent on health care. This table indicates that the health care sector has been a growth sector in the United States economy over time. The Health Care Financing Administration annually calculates national health expenditures according to type of service and source of fund. The growth in total health care expenditures is examined in Tables 9 and 10. Table 9 presents data for selected years showing health care expenditures by type of expenditures, while Table 10 provides the source of payment for these health care expenditures in 1982.

There are a number of factors that contribute to the growth in health spending. One factor is that the population of the United States is aging and older people require more health care. Medicare was created in 1965 to protect the elderly from the high cost of health care. In 1981, 25.6 million people, 65 years of age and over, were enrolled in Medicare. The Medicare enrollment rate has been increasing at an annual rate of 2.0 percent since 1966 (Table 11). Program expenditures for individuals over age 65 totaled $34.5 billion in 1981. This amounts to a reimbursement of about $2,000 per person for the 17 million elderly people receiving benefits. Information on Medicare utilization and reimbursement by type of services are provided in Table 12 and 13 respectively.

According to the Health Care Financing Administration, the major factor in the growth of spending for health care is price inflation. General price inflation, measured by the consumer price index, accounted for 51 percent of the growth in health expenditures, and medical care price information, in excess of general inflation, accounted for an additional 27 percent of the increases from 1981 to 1982. Tables 14, 15, and 16 provide information on the consumer price index and the medical care component of the index for selected years.

Figure 4

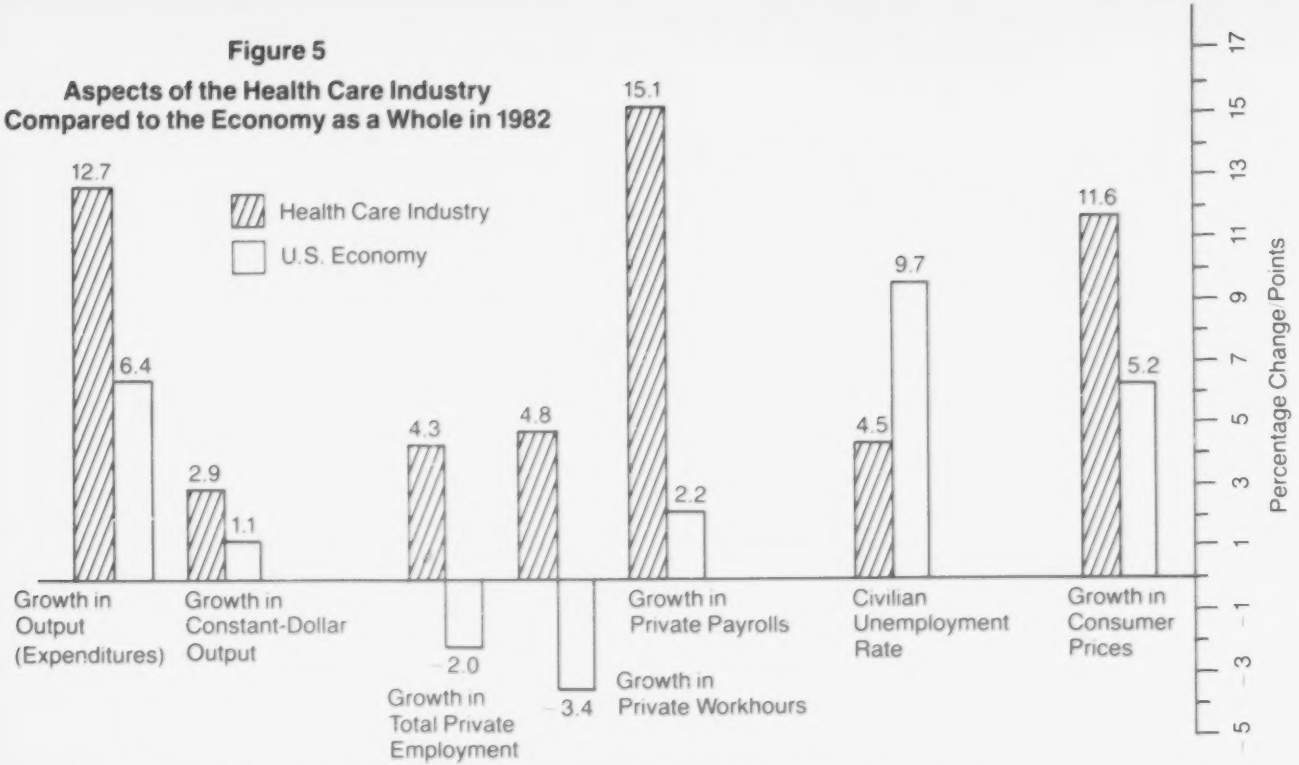
The Nation's Health Dollar in 1982


where it comes from...
Direct Patient Payments 28¢
Medicare 16¢
Federal & State Medicaid 11¢
Other State/Local Governments 9¢
All Other Federal Programs 7¢
Private Health Insurers and Other Private Third Parties 29¢
...and where it goes
Hospital Care 42¢
Other Health spending 11¢
Other Health Care Services 19¢
Physicians' Services 19¢
Nursing Home Care 9¢

SOURCE: Gibson, R. M., D. R. Waldo, and K. R. Levit, "National Health Expenditures, 1982". *Health Care Financing Review* 5:5, Fall 1983.

Figure 5

Aspects of the Health Care Industry Compared to the Economy as a Whole in 1982



SOURCE: Gibson, R. M., D. R. Waldo, and K. R. Levit, "National Health Expenditures, 1982". *Health Care Financing Review* 5:15, Fall 1983.

Table 8
Aggregate and Per Capita National Health Expenditures, by Percent of Gross National Product, Selected Years 1929–1982

Year	Gross National Product (billions)	Health Expenditures (billions)	Percent of GNP	Per Capita Expenditures
1929	$ 103.4	$ 3.6	3.5%	$ 29
1940	100.0	4.0	4.0	30
1950	286.5	12.7	4.4	82
1960	506.5	26.9	5.3	146
1965	691.0	41.7	6.0	211
1970	992.7	74.7	7.5	358
1975	1,549.2	132.7	8.6	604
1978	2,163.9	189.3	8.8	836
1979	2,417.8	215.0	8.9	938
1980	2,633.1	249.0	9.5	1,075
1981	2,937.7	286.6	9.8	1,225
1982	3,059.3	322.4	10.5	1,365

SOURCE: Gibson, R. M., D. R. Waldo, and K. R. Levit, "National Health Expenditures, 1982". *Health Care Financing Review* 5:3–4, Fall 1983.

Table 9
National Health Expenditures by Type of Expenditure, Selected Years 1950–1982

	1950	1955	1960	1965	1970	1975	1980	1981	1982
	(billions of dollars)								
Total	$12.7	$17.7	$26.9	$41.7	$74.7	$132.7	$249.0	$286.6	$322.4
Health Services and Supplies	11.7	16.9	25.2	38.2	69.3	124.3	237.1	273.5	308.3
Personal Health Care	10.9	15.7	23.7	35.8	65.1	116.8	219.4	254.6	286.9
Hospital Care	3.9	5.9	9.1	13.9	27.8	52.1	100.4	118.0	135.5
Physicians' Services	2.7	3.7	5.7	8.5	14.3	24.9	46.8	54.8	61.8
Dentists' Services	1.0	1.5	2.0	2.8	4.7	8.2	15.4	17.3	19.5
Other Professional Services	.4	.6	.9	1.0	1.6	2.6	5.6	6.4	7.1
Drugs and Medical Supplies	1.7	2.4	3.7	5.2	8.0	11.9	19.3	21.3	22.4
Eyeglasses and Appliances	.5	.6	.8	1.2	1.9	3.2	5.1	5.7	5.7
Nursing-Home Care	.2	.3	.5	2.1	4.7	10.1	20.6	24.2	27.3
Other Health Services	.5	.7	1.1	1.1	2.1	3.7	6.0	6.9	7.6
Program Administration and Net Cost of Insurance	.5	.8	1.1	1.7	2.7	4.4	10.7	11.1	12.7
Government Public Health Activities	.4	.4	.4	.8	1.4	3.2	7.0	7.7	8.6
Research and Construction of Medical Facilities	1.0	.9	1.7	3.5	5.4	8.4	11.8	13.1	14.1
Research[1]	.1	.2	.7	1.5	2.0	3.3	5.3	5.7	5.9
Construction	.8	.7	1.0	2.0	3.4	5.1	6.5	7.5	8.2

[1]Research and development expenditures of drug companies and other manufacturers and providers of medical equipment and supplies are excluded from "research expenditures", but are included in the expenditure class in which the product falls.

SOURCE: Gibson, R. M., D. R. Waldo, and K. R. Levit, "National Health Expenditures, 1982". *Health Care Financing Review* 5:6, Fall 1983.

Table 10
National Health Care Expenditures by Type of Expenditure and Source of Funds in 1982

	Private						Public		
			Consumer						
	Total	Total	Total	Patient Direct	Health Insurance	Other[1]	Total	Federal	State & Local
	(billions of dollars)								
Total	$322.4	$185.6	$174.7	$90.4	$84.2	$10.9	$136.8	$93.2	$43.7
Health Services and Supplies	308.3	179.5	174.7	90.4	84.2	4.8	128.7	87.5	41.2
Personal Health Care	286.9	171.2	167.0	90.4	76.6	4.2	115.7	83.7	32.0
Hospital Care	135.5	63.5	61.3	16.4	44.9	2.2	72.0	54.6	17.4
Physicians' Services	61.8	44.8	44.7	23.1	21.7	—	17.0	13.4	3.6
Dentists' Services	19.5	18.7	18.7	13.4	5.2	—	.8	.4	.4
Other Professional Services	7.1	4.9	4.9	3.6	1.3	.1	2.2	1.7	.5
Drugs and Medical Services	22.4	20.4	20.4	17.6	2.8	—	1.9	.9	1.0
Eyeglasses and Appliances	5.7	4.8	4.8	4.4	.4	—	.8	.7	.1
Nursing-Home Care	27.3	12.3	12.2	11.9	.2	.2	15.0	7.9	7.1
Other Health Services	7.6	1.7	—	—	—	1.7	5.9	4.0	1.9
Program Administration and Net Cost of Insurance	12.7	8.3	7.7	—	7.7	.6	4.4	2.4	2.0

(continued)

Table 10 (Cont'd.)
National Health Care Expenditures by Type of Expenditure and Source of Funds in 1982

	Private						Public		
			Consumer						
	Total	Total	Total	Patient Direct	Health Insurance	Other[1]	Total	Federal	State & Local
	(billions of dollars)								
Government Public Health Activities	8.6	—	—	—	—	—	8.6	1.4	7.3
Research and Construction of Medical Facilities	14.1	6.0	—	—	—	6.0	8.1	5.7	2.4
Research[1]	5.9	.3	—	—	—	.3	5.6	5.0	.5
Construction	8.2	5.7	—	—	—	5.7	2.5	.7	1.9

[1]Spending by philanthropic organizations, industrial health in-plant services and privately financed construction.
[2]Research and development expenditures of drug companies and other manufacturers and providers of medical equipment and supplies are excluded from "research expenditures", but are included in the expenditure class in which the product falls.
SOURCE: Gibson, R. M., D. R. Waldo, and K. R. Levit, "National Health Expenditures, 1982". *Health Care Financing Review* 5:7, Fall 1983.

Table 11
Medicare Enrollment—Number of Aged Medicare Enrollees and Percent Change by Type of Coverage, Age, Sex, and Race in 1966, 1980, and 1981

	Hospital Insurance					Supplementary Medical Insurance				
	Number in Thousands			Annual Percent Change		Number in Thousands			Annual Percent Change	
Characteristic	1966	1980	1981	1966–1981	1980–1981	1966	1980	1981	1966–1981	1980–1981
Total Enrollment	19,082	25,104	25,591	2.0%	1.9%	17,736	24,680	25,182	2.4%	2.0%
Age										
65–69	6,507	8,302	8,423	1.7	1.5	6,058	8,156	8,270	2.1	1.4
70–74	5,483	6,592	6,729	1.4	2.1	5,128	6,570	6,706	1.8	2.1
75–79	3,769	4,731	4,830	1.7	2.1	3,506	4,684	4,809	2.1	2.7
80–84	2,140	3,072	3,103	2.5	1.0	1,975	2,981	3,015	2.9	1.1
85 and over	1,183	2,407	2,505	5.1	4.1	1,069	2,289	2,381	5.5	4.0
Sex–										
Men	8,133	10,156	10,340	1.6	1.8	7,534	9,868	10,055	1.9	1.9
Women	10,950	14,948	15,250	2.2	2.0	10,202	14,813	15,127	2.7	2.1
Race[1]										
White	17,042	22,244	22,661	1.9	1.9	15,938	21,876	22,298	2.3	1.9
All Other Races	1,445	2,160	2,210	2.9	2.3	1,264	2,114	2,172	3.7	2.8

[1]Excludes persons of unknown race.

SOURCE: Health Care Financing Administration, *Annual Medicare Program Statistics*, U.S. Department of Health and Human Services, Baltimore, MD, August 1983.

Table 12
Medicare Utilization—Number of Aged Persons Served and Percent Change by Type of Service in 1967, 1980, and 1981

Type of Service	Persons Served In Thousands			Annual Percent Change		Persons Served per 1,000 Enrolled			Annual Percent Change	
	1967	1980	1981	1967–1981	1980–1981	1967	1980	1981	1967–1981	1980–1981
All covered services	7,154	16,271	17,036	6.4%	4.7%	366.5	637.7	655.0	4.2%	2.7%
Hospital Insurance	3,960	6,024	6,229	3.3	3.4	203.1	240.0	243.4	1.3	1.4
Inpatient Hospital Services	3,601	5,951	6,072	3.8	2.0	184.7	237.1	237.3	1.8	0.1
Skilled Nursing Facility Services	354	248	243	−2.7	−2.0	18.2	9.9	9.5	−4.5	−4.0
Home Health Agency Services	126	675	881	14.9	30.6	6.5	26.9	34.4	12.6	27.9
Supplementary Medical Insurance	6,523	16,099	16,858	7.0	4.7	364.5	652.3	669.5	4.4	2.6
Physician and Other Medical Services	6,415	15,627	16,380	6.9	4.8	358.5	633.2	650.5	4.3	2.7
Outpatient Hospital Services	1,511	6,629	7,096	11.7	7.0	77.4	268.6	281.8	9.7	4.9
Home Health Agency Services	118	302	187	3.4	−38.0	6.6	12.2	7.4	0.8	−39.3

SOURCE: Health Care Financing Administration, *Annual Medicare Program Statistics*, U.S. Department of Health and Human Services, Baltimore, MD, August 1983.

Table 13
Medicare Reimbursement—Amount Reimbursed for Aged Persons and Percent Change by Type of Service in 1967, 1980, and 1981

Type of Service	Reimbursement In Millions			Annual Percent Change		Reimbursement per Person Served			Annual Percent Change	
	1967	1980	1981	1967–1981	1980–1981	1967	1980	1981	1967–1981	1980–1981
All covered services	$4,239	$29,134	$34,490	16.2%	18.4%	$592	$1,791	$2,024	9.2%	13.0%
Hospital Insurance	2,967	20,353	24,153	16.2	18.7	749	3,379	3,877	12.5	14.7
Inpatient Hospital Services	2,659	19,583	23,111	16.7	18.0	738	3,291	3,806	12.4	15.6
Skilled Nursing Facility Services	274	331	361	2.0	9.1	774	1,336	1,486	4.8	11.2
Home Health Agency Services	26	440	682	26.3	55.0	204	652	774	10.0	18.7
Supplementary Medical Insurance	1,272	8,781	10,336	16.1	17.7	195	545	613	8.5	12.5
Physician and Other Medical Services	1,224	7,361	8,688	15.0	18.0	191	471	530	7.6	12.5
Outpatient Hospital Services	38	1,261	1,557	30.4	23.5	25	190	219	16.8	15.3
Home Health Agency Services	17	159	91	12.7	−42.4	145	526	488	9.1	−7.2

SOURCE: Health Care Financing Administration, *Annual Medicare Program Statistics*, U.S. Department of Health and Human Services, Baltimore, MD, August 1983.

Table 14
Consumer Price Index, Selected Years 1950–1983

Item	Year								
	1950	1960	1965	1970	1975	1980	1981	1982	1983
All Items	72.1	88.7	94.5	116.3	161.2	246.8	272.4	289.1	298.4
Less Medical Care	NA	89.4	94.9	116.1	160.9	245.5	270.9	286.8	300.0
Medical Care	53.7	79.1	89.5	120.6	168.6	265.9	294.5	328.7	357.3
Food	74.5	88.0	94.4	114.9	175.4	254.6	274.6	285.7	291.7
Apparel and Upkeep	79.0	89.6	93.7	116.1	142.3	178.4	186.9	191.8	196.5
Housing	72.8	90.2	94.9	118.2	164.5	263.3	293.5	314.7	323.1
Transportation	68.2	89.6	95.9	112.7	150.6	249.7	280.0	291.5	298.4
Entertainment	NA	NA	NA	116.7	152.2	205.3	221.4	235.8	246.0
Other Goods and Services	NA	NA	NA	116.8	153.9	214.5	235.7	259.9	288.3
All Services	58.7	83.5	92.2	121.6	166.6	270.3	305.7	333.3	344.9
Energy	NA	94.2	96.3	107.0	176.6	361.1	410.0	416.1	419.3

NOTE: 1967 = 100; data are annual averages; data beginning 1978 are for all urban consumers; earlier data are for urban wage earners and clerical workers; NA indicates not available.

SOURCE: U.S. Office of the President: *Economic Report of the President.* Government Printing Office: 279, 282, 1984.

Table 15
Medical Care Component of the Consumer Price Index, Selected Years 1950–1983

Item	Year								
	1950	1960	1965	1970	1975	1980	1981	1982	1983
Medical Care Total	53.7	79.1	89.5	120.6	168.6	265.9	294.5	328.7	357.3
Medical Care Services	49.2	74.9	87.3	124.2	179.1	287.4	318.2	356.0	387.0
Physicians' Services	55.2	77.0	88.3	121.4	169.4	269.3	299.0	327.1	352.3
Dentists' Services	63.9	82.1	92.2	119.4	161.9	240.2	263.3	283.6	302.7
Semi-private Hospital Room	30.3	57.3	75.9	145.4	236.1	418.9	481.1	556.7	619.7
Prescription Drugs	92.6	115.3	102.0	101.2	109.3	154.8	172.5	192.7	213.8
Over-the-counter Drugs	NA	NA	98.0	106.2	130.1	188.1	211.4	234.2	251.7

NOTE: 1967 = 100; data are annual averages; data beginning 1978 are for all urban consumers; earlier data are for urban wage earners and clerical workers; NA indicates not available.

SOURCE: U.S. Department of Health and Human Services: Medical Care Component of the Consumer Price Index for Urban Wage and Clerical Workers, 1940–79. *Social Security Bulletin* 43:73–74, December 1980.
U.S. Department of Labor, Bureau of Labor Statistics: *CPI Detailed Reports*: 88, January 1982; 119, January 1983; forthcoming.

Table 16
Annual Percentage Increases in Selected Components of the Consumer Price Index, Selected Years 1972–1983*

Selected Items	Average Annual Percentage Increase 1979–1983	Year							
		1972	1973	1974	1975	1980	1981	1982	1983
All Items	8.4	3.4	8.8	12.2	7.0	12.4	8.9	3.9	3.8
All Services	9.9	3.6	6.2	11.3	8.2	14.2	13.0	3.9	4.8
Food and Beverages	6.0	4.4	18.5	12.0	6.2	10.1	4.3	3.2	2.7
Housing	9.1	3.4	6.9	13.4	7.5	13.7	10.2	13.6	3.5
Medical Care	10.0	3.3	5.2	12.4	9.9	10.0	12.5	11.0	6.4
Prescription Drugs	10.3	−1.2	0.2	5.2	5.7	9.8	12.6	12.0	9.6
Physicians' Services	9.4	2.4	4.0	13.3	11.8	11.0	11.7	11.2	7.5
Dental Services	8.9	2.8	3.7	11.4	7.8	10.7	10.2	5.9	8.2
Hospital Room Charges	12.9	5.0	5.7	16.5	14.7	13.9	17.0	13.3	9.3

*Percentage increases are computed using December to December indices for each year.
SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, *CPI Detailed Reports*, for December selected years.

Chapter 3: Financing Mechanisms for the Provision of Health Services

The increasing share of gross national product going to health care has led to a review of the current methods of financing health care. Two factors are important in this regard:

- government subsidies of health care spending; and
- private health insurance.

The majority of expenditures in the health care sector, unlike other consumer markets, are paid for by third-party payers rather than consumers themselves. The extent of all third-party reimbursement (both private insurance and government spending) ranges from 88 percent of hospital care to 22 percent of eyeglasses (Table 17). During 1982 both private health insurance reimbursement and government payments for health care grew at a faster rate than total health care expenditures. However, in 1982 the percentage of all expenditures coming from the public sector (40.3 percent) declined slightly for the first time since 1977 (Figure 6).

In 1980 only 6.4 percent of the United States population did not have insurance coverage by some third-party payers (Figure 7). Thus, for the majority of U.S. population, the present system of financing health care services—through private insurance and government programs—has been successful in providing access to care.

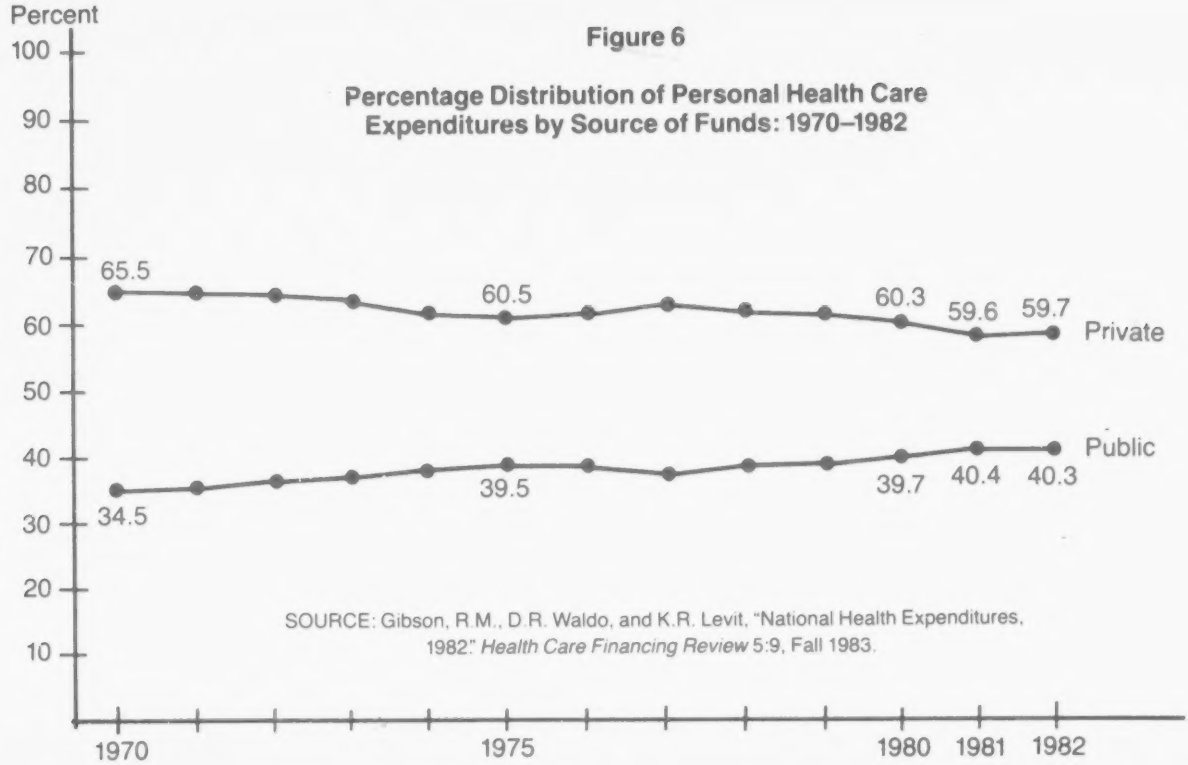
Table 17
Personal Health Care Expenditures by Selected Third-Party Payers and Type of Expenditure in 1982 (billions of dollars)

Source of Payment	Personal Care	Hospital Care	Physicians' Services	Dentists' Services	Other Prof. Services	Drugs Etc.	Eyeglasses Care	Nursing Home Care	Other Care
Total	$286.9	$135.5	$61.8	$19.5	$7.1	$22.4	$5.7	$27.3	$7.6
Patient Direct Payments	90.4	16.4	23.1	13.4	3.6	17.6	4.4	11.9	—
Third-Party Payments	196.4	119.2	38.7	6.0	3.5	4.7	1.2	15.4	7.6
Private Health Insurance	76.6	44.9	21.7	5.2	1.3	2.8	.4	.2	—
Philanthropy and Industrial In-Plant	4.2	2.2	—	—	.1	—	—	.2	1.7
Government	115.7	72.0	17.0	.8	2.2	1.9	.8	15.0	5.9
Federal	83.7	54.6	13.4	.4	1.7	.9	.7	7.9	4.0
Medical	50.9	36.3	11.4	—	1.3	—	.6	.5	.8
Medicaid	16.9	6.2	1.5	.3	.4	.9	—	6.9	.8
Other	15.9	12.1	.5	.1	—	—	.1	.5	2.5
State and Local	32.0	17.4	3.6	.4	.5	1.0	.1	7.1	1.9
Medicaid	15.5	5.6	1.4	.3	.3	.8	—	6.3	.7
Other	16.5	11.8	2.2	.1	.2	.2	.1	.8	1.2

SOURCE: Gibson, R. M., D. R. Waldo, and K. R. Levit, "National Health Expenditures, 1982." *Health Care Financing Review* 5:12, Fall 1983.

Figure 6

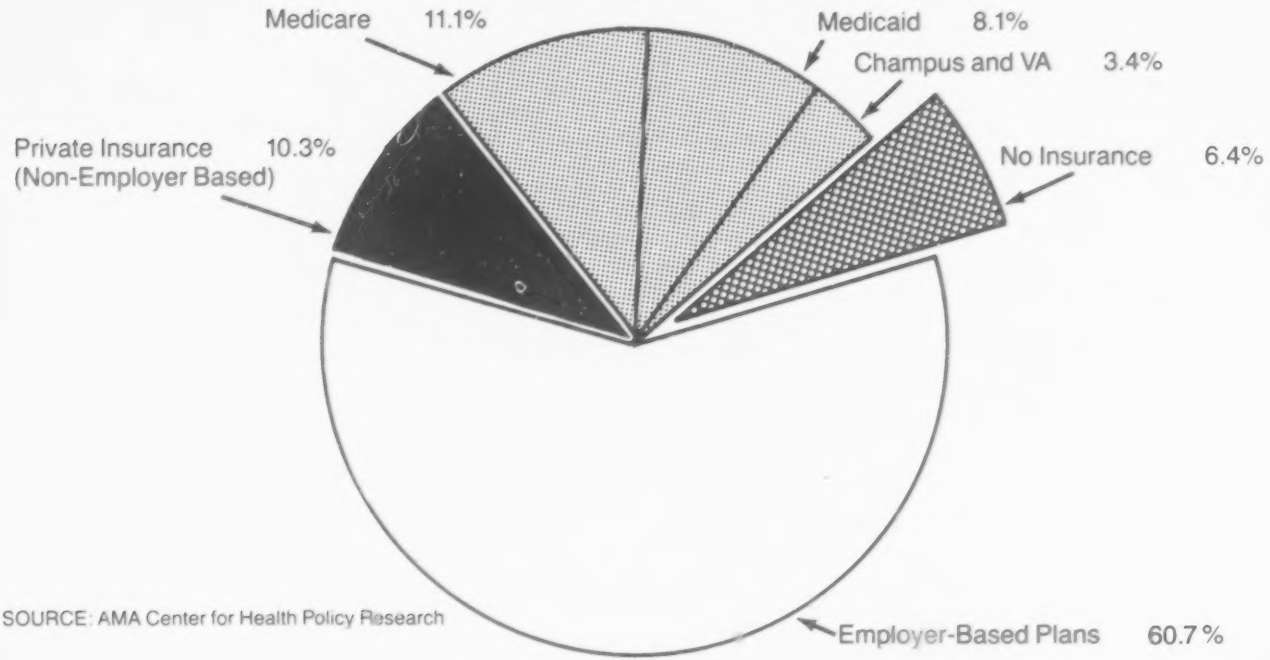
Percentage Distribution of Personal Health Care Expenditures by Source of Funds: 1970–1982



SOURCE: Gibson, R.M., D.R. Waldo, and K.R. Levit, "National Health Expenditures, 1982." *Health Care Financing Review* 5:9, Fall 1983.

Figure 7

Distribution of Health Insurance Coverage in 1980



SOURCE: AMA Center for Health Policy Research

Chapter 4: Medical Education and Medical Manpower

This chapter focuses on how one becomes a physician, by presenting information on the characteristics of the medical education system and its graduates, specifically:

- undergraduate medical education;
- medical school expenditures, funds, and student loans; and
- graduate medical training.

For the academic year 1982–1983, 35,730 persons applied to U.S. medical schools. This represents a 2.7 percent decrease in the number of students applying from the previous academic year. However, the applicants-acceptance ratio remains at 2:1, as it has since the 1979–1980 academic year (Table 18). Of the applicants, 17,230 first-year medical students enrolled in the 127 U.S. medical schools (Table 19). During the 1982–1983 academic year a total of 66,886 students were enrolled in U.S. medical schools.

The number of women entering medical school continues to increase (Table 20). For 1982–1983, 31.6 percent of the entering class were women, compared to 16.9 percent a decade earlier. An additional 16.1 percent of the first-year students were classified as minority students (Table 21); of these 5.6 percent were black and 5.1 percent were Asian or Pacific Islanders.

Medical school expenditures can be classified in two basic categories: general operating, and restricted. The restricted designation indicates that the school has little or no discretion in how the funds will be expended. Total expenditures in 1981–1982 by U.S. medical schools, exceeded 7 billion dollars. (Table 22), of which approximately 39 percent consisted of restricted expenditures. The source of funds for medical schools has changed in the last decade as policy makers have become convinced that current U.S. medical schools can produce sufficient numbers of physicians to meet future medical demands. In the 1971–1972 academic year, the federal government was the single largest source of funds for both public and private medical schools. However, by 1981–1982 the federal government only provided 22.3 percent of public and 31.9 per-

cent of private medical school funds (Table 23). For medical students, Table 24 indicates that the total amount of student financial assistance available in 1981–1982 increased by approximately 16 percent from 1980–1981. However, the data suggest that the trend is away from financial aid, awarded on the basis of need, towards federally guaranteed loans from banks.

After the completion of undergraduate medical education, nearly all U.S. medical students apply for graduate medical training. In addition to U.S. medical school graduates, students enter the U.S. graduate medical education system from foreign medical schools. Physicians enroll in programs in graduate medical education to develop their clinical skills as well as expertise in some special branch of medicine. In 1983–1984, there were 4,573 programs in graduate medical education providing approximately 70,000 residency positions. Table 25 provides information on the number of PGY-1 positions, the number of residencies available, and the number of residents on duty, by specialty.

One of the most controversial problems in U.S. graduate medical education is the role of foreign trained physicians. Since the mid-seventies there have been efforts to reduce the flow of foreign trained medical students into U.S. graduate medical training programs. Figure 8 shows the number of foreign medical graduates, by citizenship, in residency positions between 1978 and 1982. Over the 5-year period, the number of U.S. citizen foreign medical graduates in U.S. residency positions more than doubled to a total 6,388 residents. However, the number of alien foreign medical graduates declined from 9,834 in 1978 to 6,735 in 1982.

Table 18
Application Activity for First-year Class, Selected Years 1962–1963 to 1982–1983

Year	Applicants	Total Number of Applications	Applications Per Person	Accepted Applicants	Applicants-Acceptance Ratio	First Year Enrollment
1962–1963	15,847	59,054	3.7	8,959	1.8	8,642
1967–1968	18,724	93,332	5.0	9,702	1.9	9,479
1972–1973	36,135	267,306	7.4	13,757	2.6	13,726
1977–1978[1]	40,569	371,545	9.2	15,977	2.5	16,134
1978–1979	36,636	335,982	9.2	16,527	2.2	16,620
1979–1980	36,141	335,217	9.3	16,886	2.1	17,014
1980–1981[2]	36,100	330,888	9.2	17,146	2.1	17,204
1981–1982	36,727	339,975	9.3	17,286	2.1	17,320
1982–1983	35,730	334,897	9.4	17,294	2.1	17,230

[1]Applicant data given for 1977–1978 are for 119 schools and exclude the charter classes at Northeastern Ohio University, Rootstown, Marshall University in West Virginia, and Catholic University in Puerto Rico; first-year enrollment is given for 122 schools.
[2]Ponce, Puerto Rico, and South Dakota did not provide first-year enrollment; 1979–1980 figures were used for these schools.
SOURCE: American Medical Association: Medical Education in the United States, 1982–1983, *JAMA* 250:1512, September 23/30, 1983.

Table 19
Students and Graduates in Medical and Basic Science Schools, by Selected Years 1962–1963 to 1982–1983

Year	Number of Schools	Total Enrollment	First-Year*	Graduates
1962–1963	87	31,491	8,642	7,264
1967–1968	94	34,538	9,479	7,973
1972–1973	112	47,546	13,726	10,391
1977–1978	122	60,456	16,134	14,393
1978–1979	125	62,754	16,620	14,966
1979–1980	126	64,195	17,014	15,135
1980–1981[1]	126	65,497	17,204	15,667
1981–1982	126	66,485	17,320	15,985
1982–1983	127	66,886	17,230	15,728

*First-year enrollment includes students repeating this year.

[1]Ponce, Puerto Rico, and South Dakota did not provide information; 1979–1980 enrollment was used for these schools.

SOURCE: American Medical Association: Medical Education in the United States, 1982–1983, *JAMA* 250:1512, September 23/30, 1983.

Table 20
Women in U.S. Medical Schools: 1972–1973 to 1982–1983

Academic Year	Women Applicants		Women in Entering Class		Graduates	
	Number	Percent	Number	Percent	Number	Percent
1972–1973	5,480	15.2%	2,315	16.9%	924	8.9%
1973–1974	7,202	17.8	2,743	19.6	1,264	11.1
1974–1975	8,712	20.4	3,260	22.3	1,706	13.4
1975–1976	9,575	22.6	3,656	23.8	2,200	16.2
1976–1977	10,244	24.3	3,876	24.7	2,611	19.2
1977–1978	10,195	25.1	4,149	25.7	3,086	21.4
1978–1979	9,561	26.1	4,184	25.2	3,445	23.0
1979–1980	10,222	28.3	4,748	27.9	3,497	23.1
1980–1981[1]	10,644	29.5	4,970	28.9	3,892	24.8
1981–1982	11,673	31.8	5,343	30.8	3,991	25.0
1982–1983	11,685	32.7	5,445	31.6	4,193	26.7

[1]Ponce, Puerto Rico, and South Dakota did not provide information; 1979–1980 enrollment figures were used for these schools.
SOURCE: American Medical Association: Medical Education in the United States, 1982–1983, *JAMA* 250-1513, September 23/30, 1983.

Table 21
Percentage of Minority Enrollment of U.S. Citizens in U.S. Medical Schools in 1982–1983

Minority	First-Year Enrollment		Total Enrollment		Graduates	
	No.	%	No.	%	No.	%
All Minorities	2,634	16.1%	9,854	15.0%	2,031	13.0%
Black (not of Hispanic Origin)	912	5.6	3,729	5.7	813	5.2
American Indian or Alaskan Native	55	0.3	233	0.3	44	0.3
Mexican American	262	1.6	1,034	1.6	214	1.4
Puerto Rican	313	1.9	1,273	1.9	289	1.8
Other Hispanic	249	1.5	913	1.4	188	1.2
Asian or Pacific Islander	843	5.1	2,672	4.1	483	3.1

[1]First-year enrollment data exclude repeaters from count.
SOURCE: American Medical Association: Medical Education in the United States, 1982–1983, *JAMA* 250:1513, September 23 30, 1983.

Table 22
U.S. Medical School Expenditures by Function in 1981–1982*

Function	Total	General Operating			Sponsored and Restricted Programs
		Total	Recorded in Medical School Accounts	Not Recorded in Medical School Accounts	
		(millions of dollars)			
Total Expenditures	$7,059	$4,317	$3,162	$1,156	$2,742
Instruction and Departmental Research	2,629	2,072	1,860	212	557
Research	1,605	140	62	78	1,465
Health Services	1,126	682	296	386	444
Multipurpose	249	102	55	47	147
Academic Support	345	293	253	40	52
Institutional Support	454	444	259	185	10
Operation and Maintenance of Physical Plant	392	387	269	118	5
Student Services	58	55	44	11	3
Scholarships and Fellowships	80	36	24	12	44
Other	121	106	39	67	15

*Data reported by 121 medical schools. Totals may not equal the sum of the parts because of rounding.
SOURCE: American Medical Association: Medical Education in the United States, 1982–1983, *JAMA* 250:1525, September 23/30, 1983.

Table 23
Percent of Funds to Public and Private Medical Schools by Source of Funds in 1971–1972 and 1981–1982

Sources of Funds	1971–1972		1981–1982	
	Public	Private	Public	Private
Federal	40.7%	47.9%	22.3%	31.9%
State	33.2	14.5	37.7	7.7
Other	26.1	37.6	40.0	60.4

SOURCE: American Medical Association: Medical Education in the United States, 1982–1983, *JAMA* 250:1531, September 23/30, 1983.

Table 24
Major Sources of Loans and Scholarship Funds in 1980–1981 and 1981–1982

	1980–1981[1]			1981–1982[2]		
	Amount (in millions)	No.	Average Amount, $	Amount (in millions)	No.	Average Amount, $
Grand Total	$401.9	—	—	$465.4	—	—
Not administered by schools (Total)	312.2	—	—	356.1	—	—
Scholarships:						
Armed Forces Health Professions Scholarships	38.0	3,425	$11,103	44.8	3,263	$13,733
National Health Services Corp.	50.1	4,079	12,285	38.7	2,882	13,435
Loans:						
Guaranteed Student Loans	185.4	40,687	4,558	214.9	43,809	4,905
Health Education Assistance Loans	15.3	2,121	7,214	33.2	4,701	7,055
Other Loans	9.9	3,536	2,813	9.1	3,678	2,472

(continued)

Table 24 (Cont'd)
Major Sources of Loans and Scholarship Funds in 1980–1981 and 1981–1982

	1980–1981[1]			1981–1982[2]		
	Amount (in millions)	No.	Average Amount, $	Amount (in millions)	No.	Average Amount, $
Administered by schools (Total)	89.7	—	—	109.4	—	—
Scholarships:						
Exceptional Financial Need	5.1	441	11,644	4.9	418	11,721
School Funds	23.1	11,459	2,01	27.2	11,418	2,380
Other Scholarships	8.1	5,287	1,541	9.1	6,248	1,450
Loans:						
Health Professions Loans	22.7	9,208	2,464	24.3	10,245	2,376
Guaranteed Student Loans	3.9	946	4,128	13.8	2,605	5,287
National Direct Student Loans	16.0	7,933	2,022	12.7	7,216	1,765
School Funds	9.3	5,952	1,561	9.6	6,283	1,531

[1]One hundred eighteen schools reported.
[2]One hundred twenty schools reported. Missing schools were State University of New York, Downstate Medical Center; University of California, Davis; University of Miami; Brown University, Providence, R.I.
SOURCE: American Medical Association. Medical Education in the United States, 1982–1983. *JAMA* 250:1531, September 23/30, 1983.

Table 25
Number of Postgraduate Year 1 (PGY-1) Positions Offered, Number of Residency Positions Offered, and Number of Residents on Duty, by Specialty: 1981–1982 to 1983–1984

Specialty	Number of PGY-1 Positions		Number of Residency Positions		Number of Residents on Duty	
	1982–1983	1983–1984*	1982–1983	1983–1984*	1981–1982	1982–1983
All specialties	18,020	18,972	71,485	73,094	68,217	69,142
Allergy and Immunology	—	—	248	273	203	236
Anesthesiology	553	519	3,465	3,562	2,930	3,369
Colon and Rectal Surgery	—	—	46	44	40	46
Dermatology	10	16	785	767	814	789
Dermatopathology	—	—	41	42	30	35
Emergency Medicine	132	198	878	988	—	885
Family Practice	2,464	2,553	7,477	7,670	7,004	7,040
Internal Medicine	6,383	6,681	17,503	17,703	17,537	17,185
Neurological Surgery	41	50	639	657	608	621
Neurology	67	94	1,331	1,398	1,236	1,276
Nuclear Medicine	3	11	247	256	197	203
Obstetrics-Gynecology	1,070	1,154	4,744	4,731	4,705	4,702
Ophthalmology	28	34	1,540	1,555	1,543	1,553
Orthopedic Surgery	231	261	2,747	2,759	2,667	2,733
Otolaryngology	84	87	1,033	1,067	995	1,001
Pathology:	590	651	2,656	2,777	2,413	2,437
Blood Banking	1	0	42	54	26	32

(continued)

Table 25 (Cont'd)
Number of Postgraduate Year 1 (PGY-1) Positions Offered, Number of Residency Positions Offered, and Number of Residents on Duty, by Specialty: 1981–1982 to 1983–1984

Specialty	Number of PGY-1 Positions		Number of Residency Positions		Number of Residents on Duty	
	1982–1983	1983–1984*	1982–1983	1983–1984*	1981–1982	1982–1983
Forensic Pathology	—	—	44	53	31	28
Neuropathology	0	3	69	83	41	37
Pediatrics:	1,903	2,018	5,912	6,031	5,961	5,720
Pediatric Cardiology	—	—	130	145	111	104
Physical Medicine and Rehabilitation	99	196	662	694	605	624
Plastic Surgery	—	—	384	390	389	365
Preventive Medicine:						
General	9	15	203	208	166	188
Aerospace Medicine	—	—	53	57	43	46
Occupational Medicine	6	5	95	128	75	78
Public Health	1	0	37	39	25	31
Psychiatry	1,006	1,052	4,596	4,804	4,336	4,235
Child Psychiatry	—	—	636	649	501	528
Radiology, Diagnostic	367	400	3,185	3,243	3,135	3,155
Radiology, Diagnostic (Nuclear)	4	10	73	129	58	62
Radiology, Therapeutic	72	81	452	487	352	388
Surgery	2,826	2,807	8,156	8,278	8,105	8,064
Pediatric Surgery	—	—	27	27	27	27
Thoracic Surgery	4	4	282	284	281	278
Urology	66	72	1,067	1,062	1,027	1,041

*Projected number of positions.

SOURCE: American Medical Association: Medical Education in the United States, 1982–1983, *JAMA* 250:1543-1545, September 23/30, 1983.

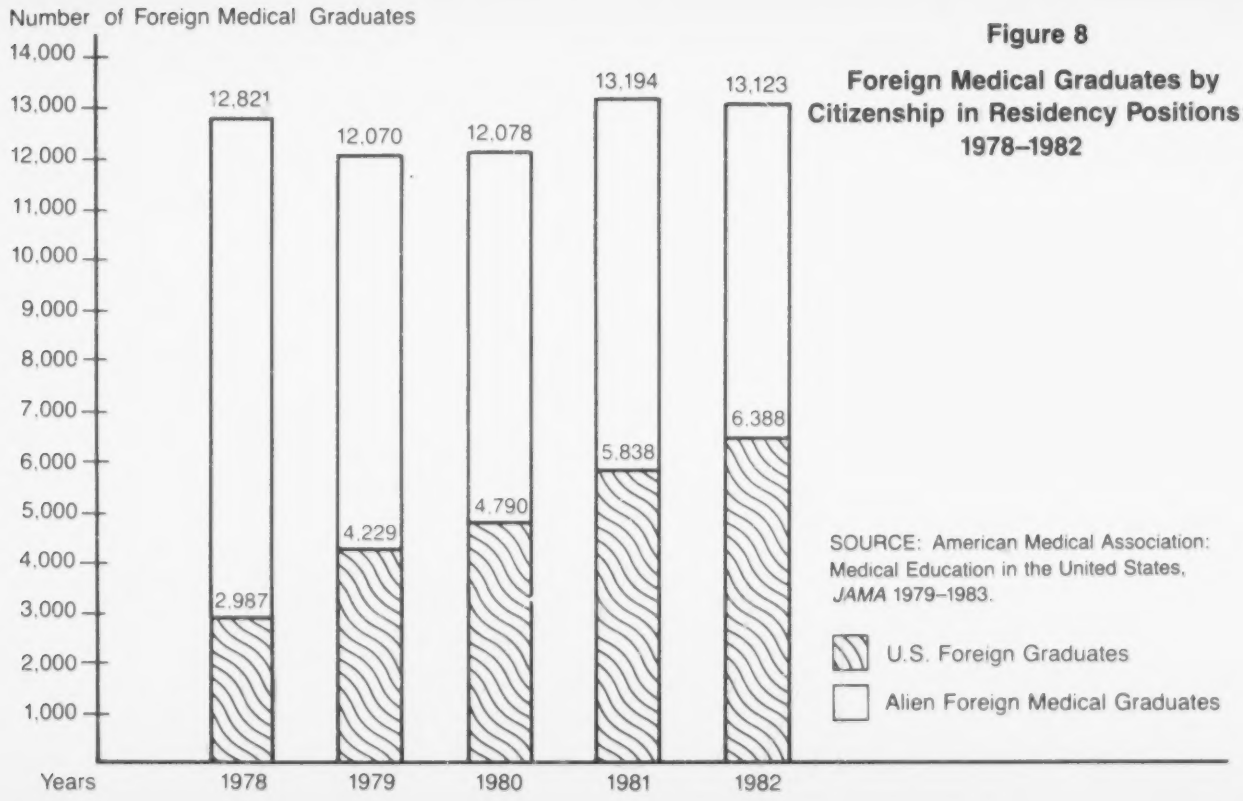


Figure 8

Foreign Medical Graduates by Citizenship in Residency Positions: 1978–1982

SOURCE: American Medical Association: Medical Education in the United States, *JAMA* 1979–1983.

Chapter 5: Health Manpower and Physician Characteristics and Distribution in the U.S.

In the last decade, one of the most documented changes in the health care sector has been the rapid increase in the supply of physicians. The total number of physicians has increased by 50.3 percent since 1970. Thus, the number of physicians per 100,000 population has increased from 163 in 1970 to 217 in 1982 (Table 26). This chapter will examine the growth in the supply of health manpower by providing:

- an overview of the physician population:
- a detailed analysis of the distribution of physicians by various characteristics; and
- information on the number of persons active in other health occupations.

The growth in the number of patient care and office-based physicians has increased nearly as rapidly as the total physician population (Figure 9). Thus, there has been almost no change in the proportion of physicians working in each of the major professional activities over time. The rapid growth in the number of physicians has skewed the age distribution of physicians toward the young. In 1982 physicians under 35 accounted for 24.8 percent of male physicians and 44.1 percent of the female physicians (Figure 10). Figure 11 shows the age distribution of physicians by specialty.

As of 1982, there were 501,958 physicians in the United States. Nearly all (90.9 percent) of the 449,389 active physicians are classified as providing "patient care." The remaining 9.1 percent of the total active physician population are divided among "administration", "medical teaching", "research", and "other activities." Table 27 indicates that the distribution of physicians by major professional activity has remained remarkably stable since 1970, while Table 28 presents the number of physicians in each specialty who were in each of the major professional activities. The rapid growth in the number of physicians has done little to change the distribution of physicians that exists by specialty (Table 29). For the 501,958 total physicians, 12.4 percent were in general/family practice, 27.9 percent were in medical specialties, and 23.7 percent were in surgical specialties. The disaggregation of physicians by specialty is also examined for:

- women physicians (Table 30);
- foreign medical graduates (Table 31); and
- physicians with board certification (Table 32).

While there are 206 non-federal physicians per 100,000 population for the United States, the ratio varies from a high of 573 in Washington, D.C., to a low of 120 in Mississippi (Table 33).

The 1981 the U.S. Department of Labor estimated that approximately 4.6 million persons were employed in health related occupations. Of the occupations listed in Table 34, nurses had the largest employment. Table 35 shows the number of active nurses by employment status in the United States for selected years.

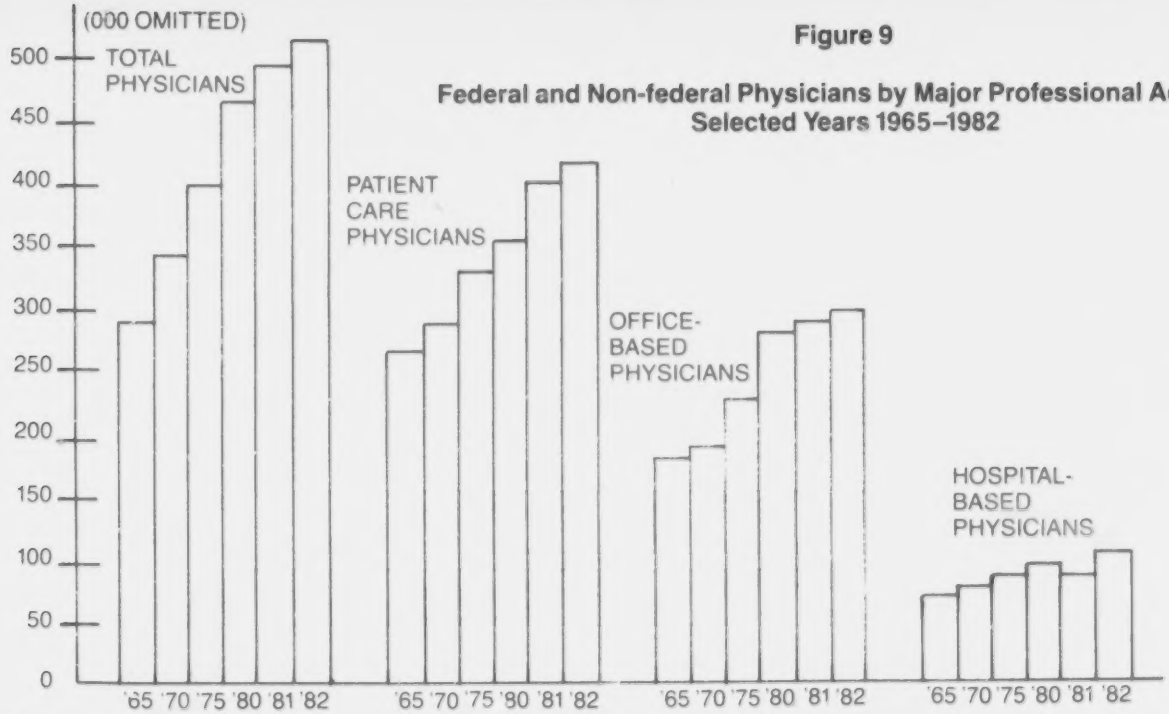
Table 26—Federal and Non-federal Physicians and the U.S. Population, Selected Years 1900–1982

Year	Total Physicians	U.S. Population (in millions)	Physicians per 100,000 Population	U.S. Population per Physician
1900	119,749	76.1	157.4	635.5
1909	135,317	90.5	149.5	668.8
1921	146,874	108.5	135.4	738.7
1931	159,105	124.1	128.2	780.0
1940	179,856	132.5	135.7	736.7
1950	219,997	151.9	144.8	690.5
1960	260,484	180.0	144.7	691.0
1970	334,028	205.5	162.5	615.2
1975	393,742	216.6	181.9	550.1
1976	409,446	218.7	187.2	534.1
1977	421,278	221.0	190.6	524.6
1978	437,486	223.4	195.8	510.6
1979	454,564	225.9	201.2	496.9
1980	467,679	228.3	204.8	488.1
1981	485,123	230.5	210.4	475.1
1982	501,958	231.7	216.6	461.9

SOURCES: *EXCERPTS from the AMA Physician Masterfile*, January 1983, Division of Survey and Data Resources, American Medical Association, 1983.
U.S. Bureau of the Census, *Current Population of the United States Series P-25;* No. 918; Washington, D.C., 1981. Census Bureau estimate for 1981.
AMA Physician Masterfile, 1982; Division of Survey and Data Resources, American Medical Association, 1984.

Figure 9

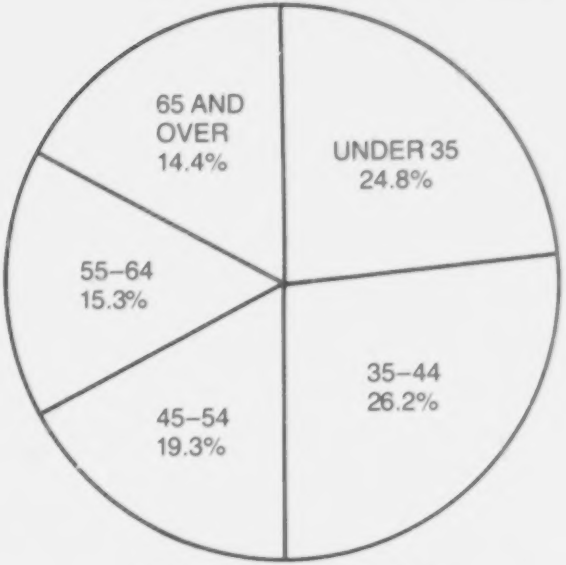
Federal and Non-federal Physicians by Major Professional Activity, Selected Years 1965–1982



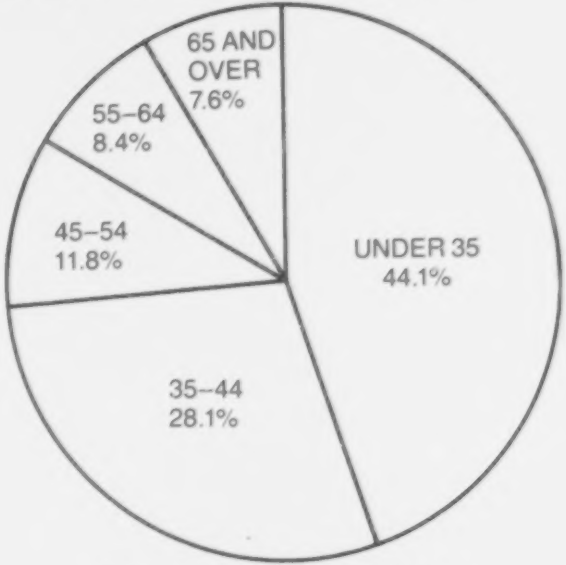
SOURCE: *Physician Characteristics and Distribution in the U.S., 1982 Edition*, Department of Data Release Services, Division of Survey and Data Resources, American Medical Association, 1983.
AMA Physician Masterfile, 1982; Division of Survey and Data Resources, American Medical Association, 1984.

Figure 10

Percentage Distribution of Federal and Non-federal Physicians by Age and Sex in 1982



MALE PHYSICIANS BY AGE
TOTAL 435,205*

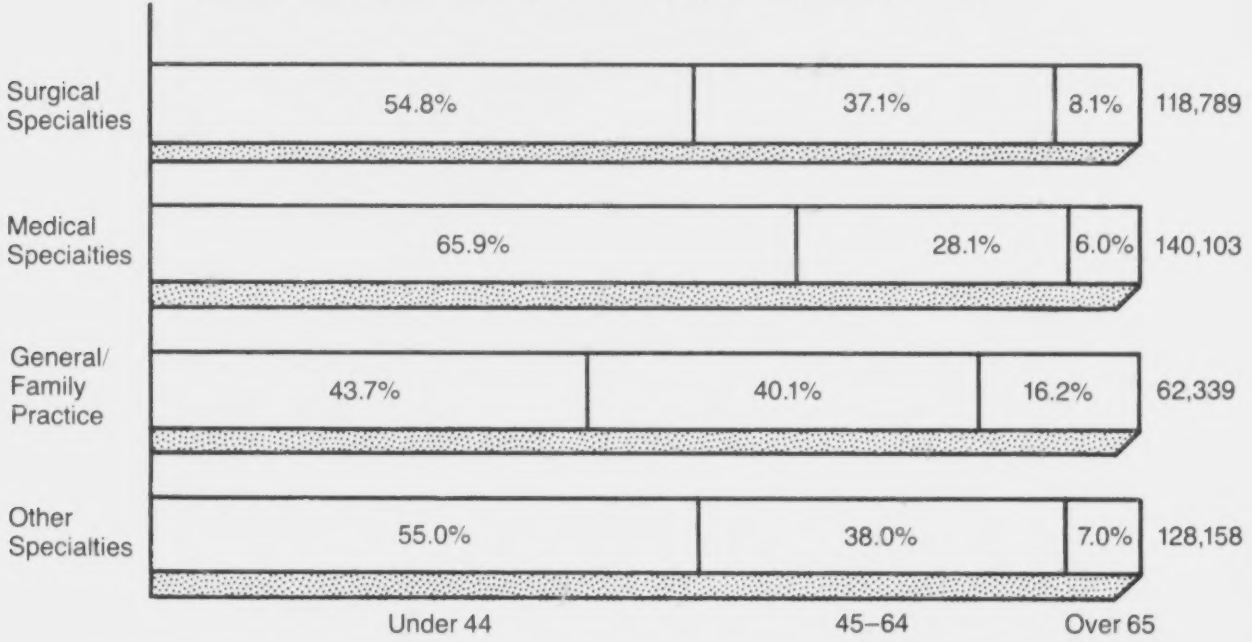


FEMALE PHYSICIANS BY AGE
TOTAL 63,432*

SOURCE: AMA Physician Masterfile, 1982; Division of Survey and Data Resources, American Medical Association, 1984.
Totals do not include Address Unknown (3,321).

Figure 11

Federal and Non-federal Physicians by Age and Specialty in 1982*



SOURCE: AMA Physician Masterfile, 1982; Division of Survey and Data Resources, American Medical Association, 1984.
Figure does not show Inactive, Not Classified and Address Unknown (52,569).

Table 27
Federal and Non-federal Physicians by Major Professional Activity, Selected Years 1970–1982

Activity	1970	1975	1980	1982	Percent Distribution* 1970	1980	1982
Total Physicians	334,028	393,742	467,679	501,958	100.0	100.0	100.0
Patient Care	278,535	311,937	376,512	408,663	83.4	80.5	81.4
Office-Based	192,439	215,429	272,000	299,191	57.6	58.2	59.6
Hospital-Based	86,096	96,508	104,512	109,472	25.8	22.3	21.8
Residents	51,228	57,802	62,042	68,986	15.3	13.3	13.7
Staff	34,868	38,706	42,470	40,486	10.4	9.1	8.1
Non-Patient Care	32,310	28,343	38,404	40,726	9.7	8.2	8.1
Medical Teaching	5,588	6,445	7,942	7,505	1.7	1.7	1.5
Administration	12,158	11,161	12,209	13,408	3.6	2.6	2.7
Research	11,929	7,944	15,377	16,743	3.6	3.3	3.3
Other	2,635	2,793	2,876	3,070	0.8	0.6	0.6
Not Classified	358	26,145	20,629	13,558	0.1	4.4	2.7
Inactive	19,621	21,449	25,744	35,690	5.9	5.5	7.1
Address Unknown	3,204	5,868	6,390	3,321	0.9	1.4	0.7

SOURCE: AMA Physician Masterfile, 1982: Division of Survey and Data Resources, American Medical Association, 1984.
Physician Characteristics and Distribution in the U.S., 1982 Edition, Department of Data Release Services, Division of Survey and Data Resources, American Medical Association, 1983.

* Percentages may not add due to rounding.

Table 28
Federal and Non-federal Physicians by Specialty and Activity in 1982

Specialty	Total Physicians	Total Patient Care	Major Professional Activity: Patient Care: Office Based	Patient Care: Hospital-Based Practice: Residents	Patient Care: Hospital-Based Practice: Full-time Staff	Other Professional Activity: Administration	Other Professional Activity: Medical Teaching	Other Professional Activity: Medical Research	Other Professional Activity: Other
Total Physicians*	501,958	408,663	299,191	68,986	40,486	13,408	7,505	16,743	3,070
Aerospace Medicine	634	409	236	32	141	161	11	25	28
Allergy	1,525	1,447	1,408		39	16	10	51	1
Anesthesiology	18,794	17,790	13,038	2,962	1,790	197	511	253	43
Cardiovascular Disease	10,934	9,023	8,072		951	272	339	1,240	60
Child Psychiatry	3,468	2,867	2,090	234	543	251	119	193	38
Colon/Rectal Surgery	762	730	688	16	26	5	6	18	3
Dermatology	6,066	5,715	4,895	559	261	65	102	161	23
Diagnostic Radiology	10,732	10,126	6,163	2,788	1,175	67	179	178	182
Emergency Medicine	8,472	8,123	5,746		2,377	204	78	47	20
Family Practice	33,831	32,691	25,019	5,756	1,916	515	490	78	57
Forensic Pathology	283	160	141	7	12	28	13	11	71
Gastroenterology	4,729	3,843	3,492		351	74	171	629	12
General Practice	28,508	27,892	25,988		1,904	385	34	59	138
General Preventive Medicine	839	407	290	72	45	265	33	104	30

(continued)

Table 28 (cont'd.)
Federal and Non-federal Physicians by Specialty and Activity in 1982

Specialty	Total Physicians	Total Patient Care	Major Professional Activity: Patient Care: Office Based	Major Professional Activity: Patient Care: Hospital-Based Practice: Residents	Major Professional Activity: Patient Care: Hospital-Based Practice: Full-time Staff	Major Professional Activity: Other Professional Activity: Administration	Major Professional Activity: Other Professional Activity: Medical Teaching	Major Professional Activity: Other Professional Activity: Medical Research	Major Professional Activity: Other Professional Activity: Other
General Surgery	35,755	34,222	23,276	8,606	2,340	536	324	597	96
Internal Medicine	79,980	70,624	45,990	18,447	6,187	2,097	1,446	5,513	300
Neurology	6,675	5,654	4,051	1,001	602	112	213	658	38
Neurological Surgery	3,726	3,582	2,740	608	234	39	36	60	9
Obstetrics/Gynecology	28,383	27,320	21,681	4,162	1,477	392	342	283	46
Occupational Medicine	2,587	1,718	1,612	36	70	708	21	60	80
Ophthalmology	13,841	13,287	11,436	1,392	459	80	111	341	22
Orthopedic Surgery	15,571	15,167	11,979	2,471	717	68	150	151	35
Otorhinolaryngology	6,873	6,660	5,494	879	287	52	72	75	14
Pathology	14,513	11,782	6,362	2,304	3,116	738	389	887	717
Pediatrics	31,415	28,348	19,584	5,895	2,869	876	756	1,313	122
Pediatric Allergy	421	370	332	18	20	4	6	39	2
Pediatric Cardiology	734	566	391	31	144	27	45	94	2
Physical Med./ Rehabilitation	2,685	2,494	1,309	469	716	114	33	30	14
Plastic Surgery	3,482	3,370	2,939	290	141	18	43	43	8
Psychiatry	29,674	26,593	17,419	3,890	5,284	1,772	474	671	164

(continued)

Table 28 (cont'd.)
Federal and Non-federal Physicians by Specialty and Activity in 1982

			Major Professional Activity						
			Patient Care			Other Professional Activity			
				Hospital-Based Practice					
Specialty	Total Physicians	Total Patient Care	Office Based	Residents	Full-time Staff	Adminis-tration	Medical Teaching	Medical Research	Other
Public Health	2,129	519	409	38	72	1,263	63	171	113
Pulmonary Diseases	4,299	3,307	2,553	191	563	143	207	614	28
Radiology	10,176	9,323	7,655		1,668	150	232	273	198
Therapeutic Radiology	1,895	1,817	1,280	236	301	17	18	42	1
Thoracic Surgery	2,140	1,985	1,677	140	168	55	27	65	8
Urological Surgery	8,236	7,999	6,733	854	412	45	87	90	15
Other	6,300	2,972	2,484		488	1,374	269	1,435	250
Unspecified	8,302	7,761	2,539	4,602	620	223	45	191	82

SOURCE: AMA Physician Masterfile 1982; Division of Survey and Data Resources; American Medical Association, 1984.
*Note: Totals include Inactive, Not Classified and Address Unknown (52,569).

Table 29
Federal and Non-federal Physicians by Specialty, Selected Years 1963--1982

	1963	1967	1970	1975	1980	1981	1982
Total MDs	276,475	308,630	334,028	393,742	467,679	485,123	501,958
General Practice*	73,489	68,920	57,948	54,557	60,049	60,594	62,339
Internal Medicine	39,109	47,517	54,392	67,696	90,633	95,526	101,467
Surgery	54,776	64,228	67,166	74,284	84,473	86,504	90,406
Pediatrics	14,207	17,614	18,819	22,730	29,462	30,680	28,383
Obstetrics/Gynecology	15,720	17,964	18,876	21,731	26,305	27,200	32,570
Radiology	8,718	10,877	13,360	16,240	20,282	21,283	22,803
Psychiatry	16,049	20,829	23,236	26,503	30,752	31,819	33,142
Anesthesiology	7,639	9,630	10,860	12,861	15,958	16,845	18,794
Pathology	7,302	9,471	10,283	11,720	13,402	13,855	14,513
Other Specialties	24,719	27,022	35,905	31,958	43,600	46,439	44,972
Other**	14,747	14,558	23,183	53,462	52,763	54,378	52,569

*Includes Family Practice in 1980 and 1981.

**Includes: Inactive, Not Classified and Address Unknown. (Not Classified was established in 1970).

SOURCES: AMA Physician Masterfile 1982; Division of Survey and Data Resources, American Medical Association, 1984.
Physician Characteristics and Distribution in the U.S., 1982 Edition, Department of Data Release Services, Division of Survey and Data Resources, American Medical Association, 1983.
Selected Characteristics of the Physician Population, 1963 and 1967, Department of Survey Research, American Medical Association, 1968.

Table 30
Federal and Non-federal Women Physicians by Specialty, Selected Years 1963–1982

	1963	1967	1970	1975	1980	1981	1982
Total MDs	17,322	21,404	25,401	35,636	54,284	59,346	64,247
General Practice*	3,103	3,073	2,486	2,866	4,677	5,423	6,067
Internal Medicine	1,761	2,385	2,916	4,533	8,930	10,326	10,832
Surgery	569	779	792	1,196	2,318	2,682	3,061
Pediatrics	2,605	3,572	3,907	5,244	8,314	9,217	10,192
Obstetrics/Gynecology	913	1,212	1,337	1,777	3,243	3,717	4,207
Radiology	329	502	673	1,006	1,742	1,969	2,356
Psychiatry	1,939	2,545	2,942	3,803	5,257	5,910	6,454
Anesthesiology	1,017	1,379	1,516	1,819	2,388	2,650	3,077
Pathology	683	1,032	1,273	1,674	2,215	2,512	2,768
Other Specialties	4,403	4,925	3,476	3,310	5,622	6,488	7,251
Other**	NA	NA	4,083	8,408	9,578	8,452	7,982

*Includes Family Practice in 1980 and 1981.

**Includes: Inactive, Not Classified and Address Unknown for 1980 and 1981. (Not Classified was established in 1970; Inactive is included in "Other Specialty" and Address Unknown data are not available for women in 1963 and 1967).

SOURCES: AMA Physician Masterfile 1982; Division of Survey and Data Resources, American Medical Association, 1984.
National Physician Trends from 1970–1981, Department of Data Release Services, Division of Survey and Data Resources, American Medical Association, 1984.
Physician Characteristics and Distribution in the U.S., 1982 Edition, Department of Data Release Services, Division of Survey and Data Resources, American Medical Association, 1983.
EXCERPTS from the AMA Physician Masterfile, January 1982, Division of Survey and Data Resources, American Medical Association, 1982.
Selected Characteristics of the Physician Population, 1963 and 1967, Department of Survey Research, American Medical Association, 1968.

Table 31
Federal and Non-federal Foreign Medical Graduates by Specialty, Selected Years 1970–1982

	1970	1976	1977	1979	1980	1981	1982
Total MDs	57,217	85,623	86,879	96,605	97,726	102,762	107,284
General Practice*	6,742	8,282	8,543	9,099	9,162	10,102	10,774
Internal Medicine	8,820	13,572	14,273	17,011	17,156	19,230	21,421
Surgery	9,407	12,277	12,668	13,633	13,449	14,711	15,045
Pediatrics	3,791	5,514	5,786	6,782	6,777	7,616	8,419
Obstetrics/Gynecology	3,064	4,308	4,713	5,265	5,268	5,864	6,188
Radiology	1,952	3,153	3,424	3,840	3,875	4,266	4,143
Psychiatry	5,450	6,916	6,983	7,658	7,542	8,224	8,744
Anesthesiology	3,304	4,741	5,243	5,823	5,886	6,447	7,008
Pathology	3,132	3,834	3,984	4,111	3,933	4,210	4,461
Other Specialties	8,480	5,913	7,069	7,172	8,543	8,243	9,664
Other**	3,075	17,113	14,103	16,211	16,135	12,453	11,417

*Includes Family Practice beginning in 1976.

**Includes: Inactive, Not Classified and Address Unknown.

SOURCE : AMA Physician Masterfile 1982; Division of Survey and Data Resources, American Medical Association, 1984.
National Physician Trends from 1970–1991, Department of Data Release Services, Division of Survey and Data Resources, American Medical Association, 1984.
Physician Characteristics and Distribution in the U.S., 1981 and 1982 Editions, Department of Data Release Services, Division of Survey and Data Resources, American Medical Association, 1982 and 1983.
Physician Distribution and Medical Licensure in the U.S., 1977 and 1979 Volumes, Center for Health Services Research and Development, American Medical Association, 1979 and 1980.

Table 32
Federal and Non-federal Physicians by Specialty and Corresponding Board Certification in 1981

Primary Specialty	Total Physicians	Board Certification Status			
		Certified by Corresponding Board Only	Certified by Corresponding Board and Other Board(s)	Certified by Non-Corresponding Board	Not Board Certified
Total Physicians	485,123	202,633	9,828	38,750	233,912
Aerospace Medicine	629	148	22	122	337
Allergy	1,527	89	285	671	482
Anesthesiology	16,845	7,725	104	226	8,790
Cardiovascular Dis.	10,378	7,625	40	315	2,398
Child Psychiatry	3,295	1,732	108	111	1,344
Colon/Rectal Surgery	754	159	263	151	181
Dermatology	5,825	4,042	206	147	1,430
Diagnostic Radiology	8,647	5,512	484	150	2,501
Emergency Medicine	7,811			2,069	5,742
Family Practice	31,195	18,091	221	272	12,611
Forensic Pathology	273	210	4	6	53
Gastroenterology	4,464	3,420	11	109	924
General Practice	29,399			3,937	25,462
General Preventive Med.	809	237	32	149	391
General Surgery	34,651	15,541	1,837	815	16,458
Internal Medicine	75,211	34,638	663	2,691	37,219

(continued)

Table 32 (cont'd.)
Federal and Non-federal Physicians by Specialty and Corresponding Board Certification in 1981

Primary Specialty	Total Physicians	Board Certification Status			
		Certified by Corresponding Board Only	Certified by Corresponding Board and Other Board(s)	Certified by Non-Corresponding Board	Not Board Certified
Neurology	6,226	2,875	406	431	2,514
Neurological Surgery	3,496	2,079	44	24	1,351
Nuclear Medicine	1,156	370	499	144	143
Obstetrics/Gynecology	27,200	15,632	49	176	11,343
Occupational Medicine	2,623	392	52	510	1,669
Ophthalmology	13,281	9,239	177	212	3,653
Orthopedic Surgery	14,572	10,142	38	66	4,326
Otorhinolaryngology	6,529	4,519	32	43	1,935
Pathology	13,855	9,547	382	226	3,700
Pediatrics	29,578	15,608	248	240	13,482
Pediatric Allergy	398	99	216	11	72
Pediatric Cardiology	704	569	3	10	122
Pediatric Med./Rehab.	2,355	1,214	50	96	995
Plastic Surgery	3,245	1,297	714	392	842
Psychiatry	28,524	12,712	241	492	15,079
Public Health	2,115	463	41	523	1,088

(continued)

Table 32 (cont'd.)
Federal and Non-federal Physicians by Specialty and Corresponding Board Certification in 1981

Primary Specialty	Total Physicians	Board Certification Status			
		Certified by Corresponding Board Only	Certified by Corresponding Board and Other Board(s)	Certified by Non-Corresponding Board	Not Board Certified
Pulmonary Diseases	3,946	2,772	26	169	979
Radiology	9,736	7,086	798	222	1,630
Therapeutic Radiology	1,744	1,242	95	36	371
Thoracic Surgery	2,085	44	1,385	349	307
Urological Surgery	7,889	5,563	52	38	2,236
Other	6,291			2,346	3,945
Unspecified	11,482			737	10,745
Not Classified	14,154			6,306*	7,848
Inactive	35,011			12,356*	22,655
Address Unknown	5,213			654*	4,559

SOURCE: *Physician Characteristics and Distribution in the U.S., 1982 Edition*, Department of Data Release Services, Division of Survey and Data Resources, American Medical Association, 1983.

* Includes physicians who are board certified. However, their board certification may or may not correspond to their specialty.

Table 33
Non-federal Physician Population Ratios and Rank by State in 1982

State	Physicians per 100,000 Population		Rank of Physician-Population Ratio		Persons per One Physician	
	Total	Patient Care	Total	Patient Care	Total	Patient Care
Total	206	169			485	591
Alabama	139	120	45	43	721	832
Alaska	134	117	47	47	748	854
Arizona	213	163	13	19	469	614
Arkansas	140	120	44	44	716	834
California	258	209	6	6	388	479
Colorado	210	172	15	14	476	581
Connecticut	280	225	5	5	358	445
Delaware	188	161	21	20	533	623
D.C.	573	425	1	1	175	235
Florida	219	165	11	16	458	607
Georgia	156	135	36	36	640	742
Hawaii	231	187	8	9	434	533
Idaho	124	105	50	50	807	949
Illinois	205	174	16	13	488	576
Indiana	143	122	42	42	697	820
Iowa	142	120	43	45	705	836
Kansas	173	146	29	28	578	685
Kentucky	151	129	39	39	663	772

(continued)

Table 33 (cont'd.)
Non-federal Physician Population Ratios and Rank by State in 1982

State	Physicians per 100,000 Population		Rank of Physician-Population Ratio		Persons per One Physician	
	Total	Patient Care	Total	Patient Care	Total	Patient Care
Louisiana	170	145	32	29	587	687
Maine	180	144	24	30	555	692
Maryland	300	233	3	4	333	429
Massachusetts	306	239	2	3	327	419
Michigan	178	150	26	25	562	666
Minnesota	211	176	14	12	474	568
Mississippi	120	105	51	51	831	953
Missouri	181	150	23	24	552	665
Montana	146	126	41	40	686	794
Nebraska	162	139	34	33	619	720
Nevada	159	136	35	35	629	737
New Hampshire	195	154	20	22	514	649
New Jersey	220	181	10	10	455	552
New Mexico	174	141	27	31	573	711
New York	300	240	4	2	334	417
North Carolina	170	140	31	32	587	716
North Dakota	151	132	38	37	662	759
Ohio	183	155	22	21	545	645
Oklahoma	138	119	46	46	724	843

(continued)

Table 33 (cont'd.)
Non-federal Physician Population Ratios and Rank by State in 1982

State	Physicians per 100,000 Population		Rank of Physician-Population Ratio		Persons per One Physician	
	Total	Patient Care	Total	Patient Care	Total	Patient Care
Oregon	203	167	17	15	493	600
Pennsylvania	214	176	12	11	467	567
Rhode Island	230	190	9	8	435	527
South Carolina	149	125	40	41	670	801
South Dakota	131	113	48	48	765	888
Tennessee	172	149	30	26	580	673
Texas	164	138	33	34	609	722
Utah	174	147	28	27	574	679
Vermont	250	192	7	7	400	522
Virginia	197	165	19	17	508	604
Washington	203	164	18	18	493	610
West Virginia	153	130	37	38	653	772
Wisconsin	178	152	25	23	561	659
Wyoming	130	110	49	49	770	905

SOURCE: *Physician Characteristics and Distribution in the U.S., 1983 Edition*, Department of Data Release Services, Division of Survey and Data Resources, American Medical Association, 1983.

Table 34
Estimated Number of Persons Active in Selected Health Occupations in 1981

Occupation	Number of Persons Active
Clinical Laboratory Technician	276,000
Dentistry and Allied Services	
Dentist	130,000
Dental Hygienist	55,000
Dental Assistant	143,000
Dietician	63,000
Nursing and Related Services	
Registered Nurse	1,339,000
Practical Nurse	403,000
Nursing Aide, Orderly, Attendant	1,131,000
Pharmacist	152,000
Physician (includes Doctor of Medicine and Doctor of Osteopathy)	454,000
Psychologist	117,000
Radiologic Technician	104,000
Therapist (includes occupational, physical, respiratory, speech)	251,000

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, unpublished data.

Table 35
Active Registered Nurses, According to Employment Status and Number per 100,000 Population, Selected Years 1950–1980

Year	Employment Status (in thousands)			Number per 100,000 Population
	Total	Full Time	Part Time	
1950	335	299	36	218
1955	430	388	42	257
1960	527	424	103	289
1965	621	466	155	318
1970	750	534	216	364
1975	961	682	279	448
1980	1,273	864	409	560

SOURCE: National Center for Health Statistics: *Health, United States, 1983*, Public Health Service, Washington, D.C., forthcoming.

Chapter 6: Profile of Medical Practice

There has been considerable debate about how the increasing number of physicians will affect the socio-economics of a physician's practice. This chapter presents information on key medical practice indicators over time for physicians by specialty and age. The data focus on physicians':

- net income;
- practice activities; and
- expenses and fees.

In general the data do not indicate that the key medical practice indicators have worsened substantially for physicians.

The average 1982 net income (total income from medical practice minus expenses, but before taxes) for all non-federal, patient care physicians was $99,500 (Table 36). Since 1973 nominal average net income for all physicians increased at an annual growth rate of 8.3 percent. For all the years shown in Table 36, physicians between the ages of 36 and 66 earned substantially more income than younger or older physicians. However, in spite of the increase in the number of physicians, average net income for physicians less than 36 years of age had the highest annual rate of growth in net income for any age group between 1973 and 1982.

Table 37 indicates that except for psychiatrists, who provide fewer hours, the hours of work in patient care activities per week by physicians in all other specialties are very similar. However, when looking at hours of patient care activities by age, physicians under 55 years of age tend to provide more hours than physicians over 55. Unlike the consistency shown in hours of patient care activity, general and family practice physicians have significantly more patient visits than physicians in other specialties (Table 38). In addition, physicians younger than age 36 and older than 66 have significantly fewer office visits than average. This pattern may indicate that young physicians are still

building a practice while old physicians are cutting back on their practice.

The average 1982 professional expenses for all non-federal, patient care physicians was $78,400 (Table 39). Between 1973 and 1982 expenses increased at an average annual rate of 10.4 percent. Thus, since 1973, expenses have increased at a faster rate than net income. In 1982, the average fee for an office visit with an established patient was $21.60 (Table 40). General and family practice physicians charge the lowest fee ($17.48) while obstetricians and gynecologists charge the highest fee ($25.76). Since 1975, physicians who are less than 36 years old have charged lower than average fees per visit. This may indicate that young physicians are competing for patients by charging lower fees.

Table 36
Mean Net Income (Income After Expenses but Before Taxes) From Medical Practice, Selected Years 1973–1982

	1973	1974	1975	1976	1978	1979	1981*	1982*
	(In Thousands of Dollars)							
ALL PHYSICIANS	48.6	52.0	56.4	61.2	65.5	78.4	93.0	99.5
Specialty								
General/Family Practice	41.9	44.7	45.4	51.1	54.6	62.0	72.2	71.9
Internal Medicine	47.8	51.4	57.0	61.5	63.8	76.2	85.1	86.8
Surgery	57.4	60.5	68.2	74.0	82.6	96.0	118.6	130.5
Pediatrics	41.1	42.1	44.3	48.2	51.2	60.4	65.1	70.3
Obstetrics/Gynecology	55.4	61.7	63.3	69.9	70.3	91.8	110.8	115.8
Radiology	59.5	63.8	75.2	76.7	81.5	98.0	116.9	136.8
Psychiatry	38.4	41.3	44.8	48.2	50.2	62.2	70.6	76.5
Anesthesiology	48.1	54.4	57.1	65.5	74.2	91.4	118.6	131.4
Physician Age								
Less Than 36 Years	32.8	40.6	43.7	49.6	49.0	64.3	62.5	73.3
36-45 Years	51.9	57.1	62.9	69.9	70.1	87.5	98.1	108.2
46-55 Years	55.0	58.9	62.3	67.7	76.2	87.1	110.8	116.5
56-65 Years	48.3	49.3	54.1	58.7	65.3	75.9	95.6	99.5
66 or More Years	31.9	34.0	35.0	36.8	44.4	54.9	68.3	64.3

SOURCE: 1981–1982, AMA Socioeconomic Monitoring System Core Surveys; 1973–80 AMA Periodic Surveys of Physicians.
*Caution should be observed in comparing 1981 and 1982 results with results for previous years because of changes in methodology made in the transition from the Periodic Surveys of Physicians to the Socioeconomic Monitoring System.

Table 37
Mean Number of Hours In Patient Care Activities Per Week, Selected Years 1973–1982

	1973	1974	1975	1976	1978	1979	1980	1982*
ALL PHYSICIANS	46.1	44.5	47.5	46.5	45.4	44.9	44.5	51.0
Specialty								
General/Family Practice	47.6	45.5	49.0	46.5	45.8	45.0	44.5	53.4
Internal Medicine	47.5	46.2	49.2	49.3	47.8	47.2	47.4	52.7
Surgery	47.8	46.3	48.9	47.9	48.2	46.9	46.5	51.4
Pediatrics	44.5	44.2	46.1	44.9	44.5	43.5	43.8	51.3
Obstetrics/Gynecology	48.8	48.1	51.6	49.4	47.3	47.8	45.9	53.5
Radiology	41.8	41.4	41.9	44.5	43.9	43.7	41.7	54.0
Psychiatry	40.3	37.3	41.0	41.3	38.2	39.6	38.8	43.2
Anesthesiology	48.0	44.7	47.2	47.2	46.6	44.5	46.5	54.5
Physician Age								
Less Than 36 Years	46.7	44.6	47.7	48.0	46.6	46.9	46.7	52.4
36-45 Years	48.3	45.8	48.7	48.2	47.4	46.8	46.1	52.3
46-55 Years	48.2	47.1	49.8	48.2	47.2	46.6	45.7	51.3
56-65 Years	44.4	44.1	46.1	45.6	44.2	44.4	43.7	50.5
66 or More Years	36.5	36.2	40.2	37.3	35.2	37.4	36.4	45.1

SOURCE: 1982, AMA Socioeconomic Monitoring System Core Surveys; 1973–80 AMA Periodic Surveys of Physicians.
*Caution should be observed in comparing 1982 results with results for previous years because of changes in methodology made in the transition from the Periodic Surveys of Physicians to the Socioeconomic Monitoring System.

Table 38
Mean Number of Total Patient Visits Per Week, Selected Years 1975–1982*

	1975	1976	1978	1979	1980	1982**
ALL PHYSICIANS	139.2	137.2	136.3	129.6	117.0	131.8
Specialty						
General/Family Practice	177.2	167.8	180.0	157.5	142.8	160.6
Internal Medicine	124.7	124.3	118.6	117.4	104.7	118.9
Surgery	119.6	122.2	110.8	115.9	99.7	118.8
Pediatrics	140.2	146.1	148.1	138.9	141.1	134.9
Obstetrics/Gynecology	131.8	133.2	126.2	125.9	113.2	128.2
Physician Age						
Less Than 36 Years	133.9	125.3	117.7	122.0	109.2	123.6
36-45 Years	143.0	145.4	135.2	130.3	120.2	131.5
46-55 Years	158.4	150.7	156.3	142.4	128.5	140.1
56-65 Years	134.1	132.6	131.9	133.8	120.0	138.5
66 or More Years	97.5	99.6	107.0	101.8	86.5	113.0

SOURCE: 1982, AMA Socioeconomic Monitoring System Core Surveys; 1973–80 AMA Periodic Surveys of Physicians.
*Data are based on information from physicians in all specialties excluding psychiatry, radiology, anesthesiology and pathology.
**Caution should be observed in comparing 1982 results with results for previous years because of changes in methodology made in the transition from the Periodic Surveys of Physicians to the Socioeconomic Monitoring System.

Table 39
Mean Professional Expenses, Selected Years 1973–1982

	1973	1974	1975	1976	1978	1979	1981*	1982*
	(In Thousands of Dollars)							
ALL PHYSICIANS	32.2	34.0	38.5	45.5	46.4	52.9	74.0	78.4
Specialty								
General/Family Practice	34.0	36.7	38.6	46.1	47.8	55.7	72.7	75.7
Internal Medicine	34.0	35.8	40.4	45.6	44.8	52.5	76.0	75.8
Surgery	38.0	39.3	49.1	60.4	63.4	69.3	92.1	105.0
Pediatrics	32.4	30.0	34.6	39.1	35.1	51.0	63.9	66.7
Obstetrics/Gynecology	37.2	41.9	48.5	60.9	61.9	67.0	99.6	109.0
Radiology	35.4	36.4	36.2	43.3	42.1	51.0	94.1	68.1
Psychiatry	14.2	14.0	18.7	19.3	24.2	23.1	28.3	37.2
Anesthesiology	14.0	19.3	20.0	25.9	25.3	26.3	48.4	52.3
Physician Age								
Less Than 36 Years	21.6	23.3	29.0	31.1	28.2	37.4	51.4	55.6
36-45 Years	35.2	36.4	41.3	52.2	47.9	59.6	76.3	77.6
46-55 Years	35.6	39.9	43.2	52.1	55.9	63.3	92.3	96.4
56-65 Years	31.8	32.6	39.0	43.6	48.3	49.3	67.7	80.4
66 or More Years	22.3	23.7	24.2	28.6	32.2	36.4	68.3	56.0

SOURCE: 1981-1982, AMA Socioeconomic Monitoring System Core Surveys; 1973–80 AMA Periodic Surveys of Physicians.
*Caution should be observed in comparing 1981 and 1982 results with results for previous years because of changes in methodology made in the transition from the Periodic Surveys of Physicians to the Socioeconomic Monitoring System.

Table 40
Mean Fee for an Office Visit with an Established Patient, Selected Years 1973–1982*

	1973	1974	1975	1976	1978	1979	1980	1982**
ALL PHYSICIANS	$ 9.76	$10.95	$11.76	$13.50	$15.17	$17.17	$18.43	$21.60
Specialty								
General/Family Practice	7.52	8.75	9.29	10.65	12.15	13.67	15.18	17.48
Internal Medicine	11.28	12.28	13.56	15.52	16.83	19.89	20.46	25.30
Surgery	10.33	11.27	12.22	13.94	15.91	17.61	19.00	23.57
Pediatrics	8.81	10.38	11.07	12.52	13.72	15.65	16.40	21.10
Obstetrics/Gynecology	11.61	13.10	13.73	15.40	18.23	19.04	20.66	25.76
Physician Age								
Less Than 36 Years	10.01	10.94	12.46	13.41	15.51	16.94	18.23	21.27
36-45 Years	9.73	11.28	11.95	13.92	15.48	17.16	18.98	22.24
46-55 Years	9.49	10.90	11.64	13.31	15.11	17.62	18.73	22.53
56-65 Years	9.97	10.85	11.42	13.35	15.22	17.15	17.68	20.85
66 or More Years	10.06	10.56	11.63	13.30	14.01	16.54	18.08	19.66

SOURCE: 1982, AMA Socioeconomic Monitoring System Core Surveys; 1973–80 AMA Periodic Surveys of Physicians.
*Data are based on information from physicians in all specialties excluding psychiatry, radiology, anesthesiology and pathology.
**Caution should be observed in comparing 1982 results with results for previous years because of changes in methodology made in the transition from the Periodic Surveys of Physicians to the Socioeconomic Monitoring System.

Chapter 7: Health Care Facility Characteristics in the U.S.

Hospital care accounts for the single largest expenditure category in the U.S. health care sector. However, in recent years the hospital, as an institution, has been in transition. Two of the major factors in this process have been:

- competition from alternative health care centers that are performing traditional hospital services; and
- change in the type of ownership and management of hospitals.

For example, investor-owned for-profit short-stay general hospitals have increased from 730 to 748 between 1980 and 1982 (Table 42). During this same period, the total number of hospitals in the United States declined by 50. The remainder of this chapter will present information on short-stay and community hospitals, the category with the most hospitals.

Since 1975 the number of short-stay hospitals has declined from 6,310 to 6,173 (Table 42). However, the number of beds in short-stay hospitals has increased from 1.04 million beds in 1975 to 1.1 million beds in 1982. Thus, the average size of these hospitals has increased from 164 beds in 1975 to 178 beds in 1982. The trend for community hospitals is also for fewer, but larger hospitals. Larger hospitals (those with 400 or more beds) have increased by 30 percent between 1972 and 1982, while the number of community hospitals with less than 50 beds have declined by 22 percent during this same period (Table 43).

The historical trend of increased utilization of community hospitals appears to have slowed at least for now. From 1981 to 1982, nearly all utilization measures of community hospitals decreased or showed little change in use (Table 44). The one exception to this pattern was the 22.4 percent growth in outpatient

visits. Part of the growth in outpatient visits may have resulted from hospitals using emergency departments for outpatient visits in response to competition from alternative health care centers. Emergency departments are available in 93.8 percent of all community hospitals, the most often provided service (Table 45).

Community hospital expenditures totaled $104.9 billion in 1982, a 15.5 percent increase from 1981. Changes in expenditures varied by size of community hospital with the greatest rate of change occurring in hospitals with 200 to 300 beds (Table 46). Adjusted expenses per inpatient day reflect the costs incurred by community hospitals in providing one day of inpatient care. In 1982, the average community hospital expenditure was $327.37 per inpatient day, 15.1 percent higher than in 1981 (Table 47). As with other community hospital indicators, the larger the hospital, the greater the adjusted expenses per inpatient day.